

Agenda

- MSFconsole
 - MSFConsole Basics
 - Core Commands
 - Search, Use, set/unset, show, info, route, quit/ exit
 - Database Backend Commands
 - Exploit Commands
 - Payload Commands
 - Auxiliary Commands
 - Post Commands

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- Database Backend Commands
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Core Commands

MSFCONSOLE

MSFConsole: Core

```
Core Commands
   Command
                  Description
                   Help menu
    back
                   Move back from the current context
                  Display an awesome metasploit banner
    banner
                   Change the current working directory
   cd
   color
                  Toggle color
                   Communicate with a host
   connect
                  Edit the current module with $VISUAL or $EDITOR
   edit
                  Exit the console
   exit
                  Gets the value of a context-specific variable
Gets the value of a global variable
    qet
    getg
                  Launch Metasploit web GUI
    go pro
    grep
                  Grep the output of another command
                  Helb menu
   info
                  Displays information about one or more module
   irb
                  Drop into irb scripting mode
    jobs
kill
                  Displays and manages jobs
                  Kill a job
Load a framework plugin
Searches for and loads modules from a path
    load
    loadpath
   makerc
                  Save commands entered since start to a file
                  Pops the latest module off the stack and makes it active
   popm
                  Sets the previously loaded module as the current module
    previous
                  Pushes the active or list of modules onto the module stack
    bushm
                  Exit the console
    auit
                  Reloads all modules from all defined module paths
   reload all
    rename job
                  Rename a job
    resource
                  Run the commands stored in a file
                  Route traffic through a session
    route
                  Saves the active datastores
   save
                  Searches module names and descriptions
   search
                  Dump session listings and display information about sessions are able to hea
Sets a context-specific variable to a value
   sessions
   set
                  Sets a global variable to a value
   setg
                  Displays modules of a given type, or all modules
   show
                  Do nothing for the specified number of seconds
   sleep
                  Write console output into a file as well the screen
   spool
                  View and manipulate background threads
    threads
                  Unload a framework plugin
   unload
                  Unsets one or more context-specific variables
   unset
                  Unsets one or more global variables
   unsetg
                  Selects a module by name
   use
                   Show the framework and console library version numbers
   version
```

- List of Commands that very often to use in core:
 - Search
 - Use
 - set/unset
 - show
 - info
 - route
 - quit/exit

msf > search -h

Usage: search [keywords]

Keywords:

app : Modules that are client or server attacks

author : Modules written by this author

bid : Modules with a matching Bugtraq ID

cve : Modules with a matching CVE ID

edb : Modules with a matching Exploit-DB ID

name : Modules with a matching descriptive name

osvdb : Modules with a matching OSVDB ID

platform: Modules affecting this platform

ref : Modules with a matching ref

type : Modules of a specific type (exploit, auxiliary, or post)

Examples:

search cve:2009 type:exploit app:client

```
msf > search ms08-067
Matching Modules
 _____
   Name
                                            Disclosure Date Rank
                                                                       Description
   exploit/windows/smb/ms08 067 netapi 2008-10-28
                                                                great MSO8-067 Microsoft Server Service Relative Path Stack Corruption
msf > search cve:2015
Matching Modules
-----
                                                             Disclosure Date Rank
   Name
                                                                                             Description
   auxiliary/gather/ie uxss injection
                                                             2015-02-01
                                                                                             Microsoft Internet Explorer 10 and 11 Cross-Domain JavaScript Injection
                                                                                 normal
                                                                                             McAfee ePolicy Orchestrator Authenticated XXE Credentials Exposure
WordPress XMLRPC GHOST Vulnerability Scanner
  auxiliary/gather/mcafee epo xxe
                                                             2015-01-06
                                                                                 normal
   auxiliary/scanner/http/wordpress ghost scanner
                                                                                 normal
                                                                                 excellent PHPMoAdmin 1.1.2 Remote Code Execution
   exploit/multi/http/phpmoadmin_exec
                                                             2015-03-03
  exploit/multi/misc/persistent_hpca_radexec_exec
exploit/unix/webapp/maarch_letterbox_file_upload
                                                                                             HP Client Automation Command Injection
                                                             2014-01-02
                                                                                 areat
                                                             2015-02-11
                                                                                 excellent Maarch LetterBox Unrestricted File Upload
  exploit/unix/webapp/wp_holding_pattern_file_upload
                                                                                excellent WordPress Holding Pattern Theme Arbitrary File Upload
                                                             2015-02-11
                                                                                             MS15-004 Microsoft Remote Desktop Services Web Proxy IE Sandbox Escape
MS15-001 Microsoft Windows NtApphelpCacheControl Improper Authorization Check
   exploit/windows/local/ms15 004 tswbproxy
                                                             2015-01-13
                                                                                 aood
   exploit/windows/local/ntapphelpcachecontrol
                                                             2014-09-30
                                                                                 normal
msf > search author:muts
Matching Modules
                                                               Disclosure Date
   Name
                                                                                  excellent Symantec Web Gateway 5.0.2.8 relfile File Inclusion Vulnerability
   exploit/linux/http/symantec web gateway lfi
                                                               2012-05-17
  exploit/linux/http/symantec_web_gateway_pbcontrol
exploit/unix/http/freepbx_callmenum
                                                                                             Symantec Web Gateway 5.0.2.18 pbcontrol.php Command Injection
FreePBX 2.10.0 / 2.9.0 callmenum Remote Code Execution
                                                               2012-07-23
                                                                                  excellent
                                                               2012-03-20
                                                                                  manual
   exploit/windows/ftp/ability server stor
                                                                                              Ability Server 2.34 STOR Command Stack Buffer Overflow
                                                               2004-10-22
                                                                                  normal
   exploit/windows/http/hp nnm ovas
                                                               2008-04-02
                                                                                              HP OpenView NNM 7.53, 7.51 OVAS.EXE Pre-Authentication Stack Buffer Overflow
                                                                                  good
  exploit/windows/http/mcafee_epolicy_source
exploit/windows/http/solarwinds_storage_manager_sql
                                                                                              McAfee ePolicy Orchestrator / ProtectionPilot Overflow
                                                               2006-07-17
                                                                                  excellent Solarwinds Storage Manager 5.1.0 SQL Injection
                                                              2011-12-07
   exploit/windows/http/sonicwall scrutinizer sqli
                                                                                  excellent Dell SonicWALL (Plixer) Scrutinizer 9 SQL Injection
                                                               2012-07-22
   exploit/windows/misc/hp omniinet 4
                                                               2011-06-29
                                                                                              HP OmniInet.exe Opcode 20 Buffer Overflow
                                                                                  aood
msf >
```

msf > use

Usage: use module_name

The use command is used to interact with a module of a given name.

msf > info

Usage: info <module name> [mod2 mod3 ...]

Queries the supplied module or modules for information. If no module is given, show info for the currently active module.

```
msf > info exploit/windows/smb/ms07 029 msdns zonename
      Name: MS07-029 Microsoft DNS RPC Service extractQuotedChar() Overflow (SMB)
    Module: exploit/windows/smb/ms07 029 msdns zonename
  Platform: Windows
 Privileged: Yes
   License: Metasploit Framework License (BSD)
      Rank: Manual
 Disclosed: 2007-04-12
Provided by:
 hdm <hdm@metasploit.com>
 Unknown
Available targets:
 Id Name
     Automatic (2000 SP0-SP4, 2003 SP0, 2003 SP1-SP2)
     Windows 2000 Server SPO-SP4+ English
     Windows 2000 Server SP0-SP4+ Italian
     Windows 2000 Server SP0-SP4+ French
     Windows 2003 Server SP0 English
     Windows 2003 Server SP0 French
   Windows 2003 Server SP1-SP2 English
     Windows 2003 Server SP1-SP2 French
    Windows 2003 Server SP1-SP2 Spanish
 9 Windows 2003 Server SP1-SP2 Italian
 10 Windows 2003 Server SP1-SP2 German
Basic options:
 Name
         Current Setting Required Description
                                    Locale for automatic target (English, French, Italian, ...)
  Locale English
                          yes
  RH0ST
                          yes
                                    The target address
                                    Set the SMB service port
  RPORT
         445
                          ves
 ayload information:
 Space: 500
  Avoid: 1 characters
Description:
 This module exploits a stack buffer overflow in the RPC interface of
```

```
msf auxiliary(tcp) > info
        Name: TCP Port Scanner
    Module: auxiliary/scanner/portscan/tcp
License: Metasploit Framework License (BSD)
        Rank: Normal
Provided by:
  hdm <hdm@metasploit.com>
  kris katterjohn <katterjohn@gmail.com>
Basic options:
                  Current Setting Required
                                                  Description
  Name
  CONCURRENCY 10
                                                   The number of concurrent ports to check per host
                                       yes
                 1-10000
                                                   Ports to scan (e.g. 22-25,80,110-900)
  P0RTS
                                      yes
                                                  A proxy chain of format type:host:port[,type:host:port][...]
The target address range or CIDR identifier
The number of concurrent threads
  Proxies
                                       no
  RH0STS
                                      yes
  THREADS
                                      yes
  TIMEOUT
                 1000
                                                   The socket connect timeout in milliseconds
                                      yes
Description:
  Enumerate open TCP services
```

msf > set -h
[-] Unknown variable
Usage: set [option] [value]

Set the given option to value. If value is omitted, print the current value. If both are omitted, print options that are currently set.

If run from a module context, this will set the value in the module's datastore. Use -g to operate on the global datastore

msf > unset

Usage: unset [-g] var1 var2 var3 ...

The unset command is used to unset one or more variables.

To flush all entires, specify 'all' as the variable name.

With -g, operates on global datastore variables.

```
msf > set RHOSTS 192.168.0.1
                              root@kali: ~
RH0STS => 192.168.0.1
msf > set
Global
 Value
  Name
  RH0STS 192.168.0.1
msf > use auxiliary/scanner/portscan/tcp
msf auxiliary(tcp) > info
       Name: TCP Port Scanner
    Module: auxiliary/scanner/portscan/tcp
License: Metasploit Framework License (BSD)
       Rank: Normal
Provided by:
  hdm <hdm@metasploit.com>
  kris katterjohn <katterjohn@gmail.com>
Basic options:
               Current Setting Required Description
  Name
                                            The number of concurrent ports to check per host
  CONCURRENCY 10
                                  yes
               1-10000
                                            Ports to scan (e.g. 22-25,80,110-900)
  P0RTS
                                  yes
                                            The target address range or CIDR identifier
               192.168.0.1
  RHOSTS
                                 ves
                                            The number of concurrent threads
  THREADS
                                  yes
  TIMEOUT
               1000
                                  ves
                                            The socket connect timeout in milliseconds
Description:
  Enumerate open TCP services
```

```
<u>msf</u> > set
Global
           Value
  Name
  RHOSTS 192.168.0.1
<u>msf</u> > unset all
Flushing datastore...
msf > set
Global
No entries in data store.
msf >
```

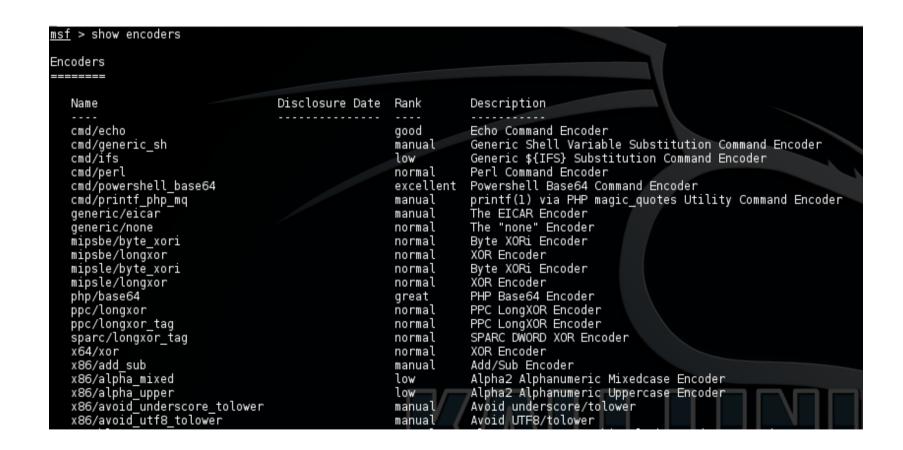
```
msf auxiliary(tcp) > set RHOSTS 192.168.0.1
RH0STS => 192.168.0.1
msf auxiliary(tcp) > set
Global
____
No entries in data store.
Module: scanner/portscan/tcp
                       Value
  Name
  CONCURRENCY
                       10
                       10
  ConnectTimeout
  P0RTS
                       1-10000
  RH0STS
                       192.168.0.1
                       false
  SSL
  SSLVerifyMode
                       PEER
  SSLVersion
                       TLS1
  ShowProgress
                       true
  ShowProgressPercent 10
  TCP::max send size
                       0
  TCP::send delay
                       0
  THREADS
  TIMEOUT
                       1000
                       false
  VERBOSE
msf auxiliary(tcp) >
```

```
msf auxiliary(tcp) > unset RHOSTS
Unsetting RHOSTS...

msf auxiliary(tcp) > set
Global
____
No entries in data store.
Module: scanner/portscan/tcp
                        Value
  Name
  CONCURRENCY
                        10
  ConnectTimeout
                        10
                        1-10000
  P0RTS
                        false
  SSL
  SSLVerifyMode
                        PEER
  SSLVersion
                        TLS1
  ShowProgress
                        true
  ShowProgressPercent
                        10
  TCP::max send size
                        0
  TCP::send delay
                        0
  THREADS
  TIMEOUT
                        1000
  VERBOSE
                        false
msf auxiliary(tcp) >
```

msf > show -h

- [*] Valid parameters for the "show" command are: all, encoders, nops, exploits, payloads, auxiliary, plugins, options
- [*] Additional module-specific parameters are: missing, advanced, evasion, targets, actions

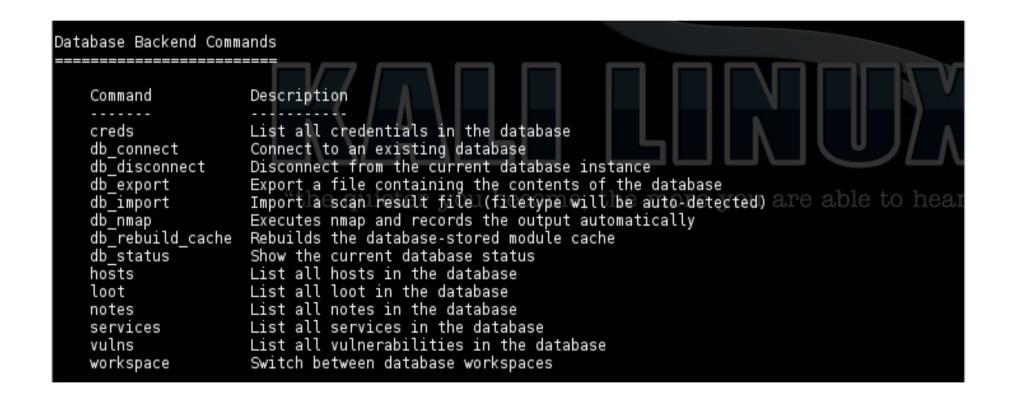


```
msf exploit(ms08 067 netapi) > show options
Module options (exploit/windows/smb/ms08 067 netapi):
            Current Setting Required Description
   Name
                                      The target address
   RH0ST
                             ves
                                       Set the SMB service port
   RPORT
            445
                            yes
                                      The pipe name to use (BROWSER, SRVSVC)
   SMBPIPE BROWSER
                            ves
Exploit target:
   Id Name
      Automatic Targeting
msf exploit(ms08 067 netapi) > show targets
Exploit targets:
      Name
      Automatic Targeting
      Windows 2000 Universal
      Windows XP SP0/SP1 Universal
      Windows 2003 SPO Universal
      Windows XP SP2 English (AlwaysOn NX)
      Windows XP SP2 English (NX)
      Windows XP SP3 English (AlwaysOn NX)
      Windows XP SP3 English (NX)
      Windows XP SP2 Arabic (NX)
      Windows XP SP2 Chinese - Traditional / Taiwan (NX)
  10 Windows XP SP2 Chinese - Simplified (NX)
      Windows XP SP2 Chinese - Traditional (NX)
```

Database Commands

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MSFConsole: Database



- List of Databases Commands that very often to use:
 - db_nmap
 - hosts
 - services

Database: db_nmap

```
msf > db nmap --help
[*] Nmap: Nmap 6.47 (http://nmap.org)
[*] Nmap: Usage: nmap [Scan Type(s)] [Options] {target specification}
[*] Nmap: TARGET SPECIFICATION:
[*] Nmap: Can pass hostnames, IP addresses, networks, etc.
[*] Nmap: Ex: scanme.nmap.org, microsoft.com/24, 192.168.0.1; 10.0.0-255.1-254
[*] Nmap: -iL <inputfilename>: Input from list of hosts/networks
[*] Nmap: -iR < num hosts>: Choose random targets
[*] Nmap: --exclude <host1[,host2][,host3],...>: Exclude hosts/networks
[*] Nmap: --excludefile <exclude file>: Exclude list from file
[*] Nmap: HOST DISCOVERY:
[*] Nmap: -sL: List Scan - simply list targets to scan
[*] Nmap: -sn: Ping Scan - disable port scan
[*] Nmap: -Pn: Treat all hosts as online -- skip host discovery
[*] Nmap: -PS/PA/PU/PY[portlist]: TCP SYN/ACK, UDP or SCTP discovery to given ports
... truncated....
```

Database: db_nmap

```
msf > db nmap -sV 192.168.0.0/24
[*] Nmap: Starting Nmap 6.47 ( http://nmap.org ) at 2015-07-20 04:00 EDT
[*] Nmap: Nmap scan report for 192.168.0.1
   Nmap: Host is up (0.011s latency).
*] Nmap: Not shown: 997 filtered ports
 *] Nmap: PORT
                  STATE SERVICE
                                    VERSION
   Nmap: 23/tcp closed telnet
*] Nmap: 1900/tcp closed upnp
 *] Nmap: 8080/tcp closed http-proxy
   Nmap: MAC Address: CC:0D:EC:B0:0D:3A (Cisco Spvtg)
 *] Nmap: Nmap scan report for 192.168.0.11
 *] Nmap: Host is up (0.012s latency).
 *] Nmap: Not shown: 982 closed ports
 *] Nmap: PORT
                  STATE SERVICE
                                      VERSION
 *] Nmap: 7/tcp
                  open echo
   Nmap: 9/tcp
                  open discard?
   Nmap: 13/tcp
                  open daytime
                                      Microsoft Windows USA daytime
                                      Windows gotd (English)
 *] Nmap: 17/tcp
                  open gotd
   Nmap: 19/tcp
                  open chargen
 *] Nmap: 42/tcp
                                      Microsoft Windows Wins
                  open wins
 *] Nmap: 53/tcp
                  open domain
                                      Microsoft DNS
   Nmap: 80/tcp
                                      Apache httpd 2.0.54 ((Win32) mod autoindex color mod ssl/2.0.54 OpenSSL/0.9.8 PHP/5.0.4)
                  open http
   Nmap: 135/tcp open msrpc
                                      Microsoft Windows RPC
 *] Nmap: 139/tcp open netbios-ssn
   Nmap: 443/tcp open ssl/https?
 *] Nmap: 445/tcp open microsoft-ds Microsoft Windows 2003 or 2008 microsoft-ds
 *] Nmap: 1025/tcp open msrpc
                                      Microsoft Windows RPC
                                      Microsoft Windows RPC
   Nmap: 1028/tcp open msrpc
 *] Nmap: 1033/tcp open msrpc
                                      Microsoft Windows RPC
 *] Nmap: 1034/tcp open msrpc
                                      Microsoft Windows RPC
                                     MySQL (unauthorized)
   Nmap: 3306/tcp open mysql
                                                              ieter you become, the more you are able to hear
 *] Nmap: 3389/tcp open ms-wbt-server Microsoft Terminal Service
*] Nmap: MAC Address: 28:CF:DA:00:B1:B1 (Apple)
   Nmap: Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows
 *] Nmap: Nmap scan report for 192.168.0.12
 *] Nmap: Host is up (0.030s latency).
*] Nmap: Not shown: 996 closed ports
 *] Nmap: PORT
                  STATE SERVICE
                                     VERSION
 *] Nmap: 22/tcp
                 open ssh
                                     OpenSSH 6.2 (protocol 2.0)
                 open kerberos-sec Heimdal Kerberos (server time: 2015-07-20 08:00:49Z)
   Nmap: 88/tcp
   Nmap: 548/tcp open afp?
   Nmap: 5900/tcp open vnc
                                     Apple remote desktop vnc
```

Database: Hosts

```
msf > hosts --help
Usage: hosts [ options ] [addr1 addr2 ...]
OPTIONS:
 -a,--add
              Add the hosts instead of searching
 -d,--delete
               Delete the hosts instead of searching
 -c <col1,col2> Only show the given columns (see list below)
 -h,--help
              Show this help information
              Only show hosts which are up
 -u,--up
 -o <file>
              Send output to a file in csv format
 -R,--rhosts
               Set RHOSTS from the results of the search
 -S,--search
               Search string to filter by
```

Available columns: address, arch, comm, comments, created_at, cred_count, detected_arch, exploit_attempt_count, host_detail_count, info, mac, name, note_count, os_flavor, os_lang, os_name, os_sp, purpose, scope, service_count, state, updated_at, virtual_host, vuln_count

Database: Hosts



Database: Services

```
msf > services --help
Usage: services [-h] [-u] [-a] [-r <proto>] [-p <port1,port2>] [-s <name1,name2>] [-o <filename>] [addr1
addr2 ...]
 -a,--add
              Add the services instead of searching
               Delete the services instead of searching
 -d,--delete
 -c <col1,col2> Only show the given columns
 -h,--help
              Show this help information
 -s <name1,name2> Search for a list of service names
 -p <port1,port2> Search for a list of ports
 -r -r only show [tcp|udp] services
             Only show services which are up
 -u,--up
 -o <file>
              Send output to a file in csv format
               Set RHOSTS from the results of the search
 -R,--rhosts
 -S,--search
               Search string to filter by
```

Available columns: created_at, info, name, port, proto, state, updated_at

Database: Services

```
msf > services -r tcp -s http
Services
-----
host
                    proto name
                                 state
                                        Apache httpd 2.0.54 (Win32) mod autoindex color mod ssl/2.0.54 OpenSSL/0.9.8 PHP/5.0.4
192.168.0.11
                     tcp
                           http
                                 open
192.168.0.13
               80
                                        Apache httpd 2.2.8 (Ubuntu) DAV/2
                     tcp
                           http
                                 open
                                        Apache Tomcat/Coyote JSP engine 1.1
192.168.0.13
              8180
                    tcp
                           http
                                 open
                                        Apache httpd 2.2.8 (Ubuntu) DAV/2
192.168.0.104 80
                           http
                     tcp
                                 open
                                        Apache Tomcat/Coyote JSP engine 1.1
192.168.0.104 8180
                           http
msf >
```

Exploit Commands

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MSFConsole: Exploit

Exploit Commands		
Command	Description	"the quieter you
check exploit pry rcheck reload rerun rexploit run	Check to see if a target is vulnerable Launch an exploit attempt Open a Pry session on the current module Reloads the module and checks if the target is vulnerable Just reloads the module Alias for rexploit Reloads the module and launches an exploit attempt Alias for exploit	

- List of Commands that very often to use in modules:
 - exploit
 - check
 - run

Payloads Commands

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MSFConsole: Payload

Auxiliary Commands

MSFCONSOLE

MSFConsole: Auxiliary

Auxiliary Comman	nds "the q
Command	Description
check exploit pry reload rerun rexploit run	Check to see if a target is vulnerable This is an alias for the run command Open a Pry session on the current module Reloads the auxiliary module Reloads and launches the auxiliary module This is an alias for the rerun command Launches the auxiliary module

Post Exploitation Commands

MSFCONSOLE

MSFConsole: Post

Post Commands	"the quie
Command	Description
check exploit pry reload rerun rexploit run	Check to see if a target is vulnerable This is an alias for the run command Open a Pry session on the current module Reload the current module from disk Reloads and launches the module This is an alias for the rerun command Launches the post exploitation module

