

Metasploit para novatos

Estos ejemplos son para una versión de Metasploit preinstalada en sistemas kali linux.

1. Inicialización de la base de datos y primer arranque de metasploit

Para el uso de metasploit se recomienda inicializar la base de datos la primera vez que se arranque con el comando:

```
msfdb init
```

Una vez que se inicialice la base de datos, cada vez que se quiera usar metasploit se puede arrancar con el siguiente comando:

```
msfdb run
```

```
(thejuanvisu@kali)-[~]
$ sudo msfdb run
[i] Database already started
Metasploit tip: View a module's description using info, or the enhanced
version in your browser with info -d
```



```
+-----+
| METASPLOIT by Rapid7 |
+-----+
| =c( (o( ( ( ) | ***** [*** | |
|              | | EXPLOIT |
|              | | [msf >] |
|              | | \(\@)(\@)(\@)(\@)(\@)(\@)/ |
|              | | ***** |
+-----+
| o o o      o o |
|              | | PAYLOAD |
| ***** | | |
| (\@)(\@)*** | | (\@)(\@)*** |
| = = = = = | | |
+-----+
|              | | LOOT | | |
|              | | C || |
|              | | - || |
|              | | - || |
|              | | || |
+-----+
```

```
= [ metasploit v6.4.18-dev ]
+ -- == [ 2437 exploits - 1255 auxiliary - 429 post ]
+ -- == [ 1468 payloads - 47 encoders - 11 nops ]
+ -- == [ 9 evasion ]

Metasploit Documentation: https://docs.metasploit.com/
```

2. Escaneo de máquina objetivo

Lo primero que debemos hacer es escanear los puertos de la máquina objetivo para identificar que servicios tiene arrancados y si alguno de estos es vulnerable.

2.1 NMAP

Primero se puede comenzar realizando un escaneo de nmap desde metasploit con el siguiente comando:

```
db_nmap <ip_maquina_objetivo>
```

Como resultado deberíamos recibir un listado de puertos abiertos indicando que servicio provee cada uno:

```
msf6 > db_nmap 192.168.56.9
[*] Nmap: Starting Nmap 7.94SVN ( https://nmap.org ) at 2025-05-02 11:03 EDT
[*] Nmap: Nmap scan report for 192.168.56.9
[*] Nmap: Host is up (0.0011s latency).
[*] Nmap: Not shown: 977 closed tcp ports (reset)
[*] Nmap: PORT      STATE SERVICE
[*] Nmap: 21/tcp    open  ftp
[*] Nmap: 22/tcp    open  ssh
[*] Nmap: 23/tcp    open  telnet
[*] Nmap: 25/tcp    open  smtp
[*] Nmap: 53/tcp    open  domain
[*] Nmap: 80/tcp    open  http
[*] Nmap: 111/tcp   open  rpcbind
[*] Nmap: 139/tcp   open  netbios-ssn
[*] Nmap: 445/tcp   open  microsoft-ds
[*] Nmap: 512/tcp   open  exec
[*] Nmap: 513/tcp   open  login
[*] Nmap: 514/tcp   open  shell
[*] Nmap: 1099/tcp  open  rmiregistry
[*] Nmap: 1524/tcp  open  ingreslock
[*] Nmap: 2049/tcp  open  nfs
[*] Nmap: 2121/tcp  open  ccproxy-ftp
[*] Nmap: 3306/tcp  open  mysql
[*] Nmap: 5432/tcp  open  postgresql
[*] Nmap: 5900/tcp  open  vnc
[*] Nmap: 6000/tcp  open  X11
[*] Nmap: 6667/tcp  open  irc
[*] Nmap: 8009/tcp  open  ajp13
[*] Nmap: 8180/tcp  open  unknown
[*] Nmap: MAC Address: 08:00:27:22:00:BD (Oracle VirtualBox virtual NIC)
[*] Nmap: Nmap done: 1 IP address (1 host up) scanned in 13.45 seconds
msf6 > 
```

2.2 Metasploit port scanner

Alternativamente también se puede usar el módulo de escaneo de metasploit, para ello podemos seleccionarlo con el siguiente comando:

```
use auxiliary/scanner/portscan/tcp
```

Una vez seleccionado el módulo, hay que configurar sus parámetros, podemos ver los parámetros disponibles con el siguiente comando.

```
show options
```

```
msf6 > use auxiliary/scanner/portscan/tcp
msf6 auxiliary(scanner/portscan/tcp) > show options

Module options (auxiliary/scanner/portscan/tcp):

  Name          Current Setting  Required  Description
  ---          -
  CONCURRENCY    10              yes       The number of concurrent ports to check per host
  DELAY          0              yes       The delay between connections, per thread, in milliseconds
  JITTER         0              yes       The delay jitter factor (maximum value by which to +/- DELAY) in milliseconds
  PORTS          1-10000         yes       Ports to scan (e.g. 22-25,80,110-900)
  RHOSTS         yes             yes       The target host(s), see https://docs.metasploit.com/docs/using-metasploit/basics/using-metasploit.html
  THREADS        1              yes       The number of concurrent threads (max one per host)
  TIMEOUT        1000           yes       The socket connect timeout in milliseconds

View the full module info with the info, or info -d command.

msf6 auxiliary(scanner/portscan/tcp) > █
```

Para configurar los parámetros se debe usar el comando set:

```
set <parámetro> <valor>
```

Por ejemplo, en este caso se debe establecer un valor para RHOST para indicarle a metasploit que máquina de la red debe escanear:

```
msf6 auxiliary(scanner/portscan/tcp) > set RHOST 192.168.56.9
RHOST => 192.168.56.9
```

Una vez configurados los parámetros se puede ejecutar el módulo con el comando run:

```
msf6 auxiliary(scanner/portscan/tcp) > run

[+] 192.168.56.9: - 192.168.56.9:22 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:21 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:25 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:23 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:53 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:80 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:111 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:139 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:445 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:513 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:514 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:512 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:1099 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:1524 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:2049 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:2121 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:3306 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:3632 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:5432 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:5900 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:6000 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:6667 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:6697 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:8009 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:8180 - TCP OPEN
[+] 192.168.56.9: - 192.168.56.9:8787 - TCP OPEN
[*] 192.168.56.9: - Scanned 1 of 1 hosts (100% complete)
[*] Auxiliary module execution completed
msf6 auxiliary(scanner/portscan/tcp) > █
```

2.3 Escaneo Profundo

Podemos realizar un escaneo profundo de la máquina en cuestión con el siguiente comando:

```
db_nmap -sV <ip_máquina_objetivo>
```

```

msf6 auxiliary(scanner/portscan/tcp) > db_nmap -sV 192.168.56.9
[*] Nmap: Starting Nmap 7.94SVN ( https://nmap.org ) at 2025-05-02 11:17 EDT
[*] Nmap: Nmap scan report for 192.168.56.9
[*] Nmap: Host is up (0.00050s latency).
[*] Nmap: Not shown: 977 closed tcp ports (reset)
[*] Nmap: PORT      STATE SERVICE VERSION
[*] Nmap: 21/tcp    open  ftp      vsftpd 2.3.4
[*] Nmap: 22/tcp    open  ssh      OpenSSH 4.7p1 Debian 8ubuntu1 (protocol 2.0)
[*] Nmap: 23/tcp    open  telnet   Linux telnetd
[*] Nmap: 25/tcp    open  smtp     Postfix smtpd
[*] Nmap: 53/tcp    open  domain   ISC BIND 9.4.2
[*] Nmap: 80/tcp    open  http     Apache httpd 2.2.8 ((Ubuntu) DAV/2)
[*] Nmap: 111/tcp   open  rpcbind  2 (RPC #100000)
[*] Nmap: 139/tcp   open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
[*] Nmap: 445/tcp   open  netbios-ssn Samba smbd 3.X - 4.X (workgroup: WORKGROUP)
[*] Nmap: 512/tcp   open  exec     netkit-rsh rexecd
[*] Nmap: 513/tcp   open  login    OpenBSD or Solaris rlogind
[*] Nmap: 514/tcp   open  shell    Netkit rshd
[*] Nmap: 1099/tcp  open  java-rmi GNU Classpath grmiregistry
[*] Nmap: 1524/tcp  open  bindshell Metasploitable root shell
[*] Nmap: 2049/tcp  open  nfs      2-4 (RPC #100003)
[*] Nmap: 2121/tcp  open  ftp      ProFTPD 1.3.1
[*] Nmap: 3306/tcp  open  mysql    MySQL 5.0.51a-3ubuntu5
[*] Nmap: 5432/tcp  open  postgresql PostgreSQL DB 8.3.0 - 8.3.7
[*] Nmap: 5900/tcp  open  vnc      VNC (protocol 3.3)
[*] Nmap: 6000/tcp  open  X11      (access denied)
[*] Nmap: 6667/tcp  open  irc      UnrealIRCd
[*] Nmap: 8009/tcp  open  ajp13    Apache Jserv (Protocol v1.3)
[*] Nmap: 8180/tcp  open  http     Apache Tomcat/Coyote JSP engine 1.1
[*] Nmap: MAC Address: 08:00:27:22:00:BD (Oracle VirtualBox virtual NIC)
[*] Nmap: Service Info: Hosts: metasploitable.localdomain, irc.Metasploitable.LAN; OSs: Unix, Linux; CPE: cpe:/o:linux:linux_kernel
[*] Nmap: Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
[*] Nmap: Nmap done: 1 IP address (1 host up) scanned in 25.27 seconds
msf6 auxiliary(scanner/portscan/tcp) >

```

Si además queremos más información podemos añadir el flag -A:

```
db_nmap -sV -A <ip_maquina_objetivo>
```

```

msf6 auxiliary(scanner/portscan/tcp) > db_nmap -sV -A 192.168.56.9
[*] Nmap: Starting Nmap 7.94SVN ( https://nmap.org ) at 2025-05-02 11:23 EDT
[*] Nmap: Nmap scan report for 192.168.56.9
[*] Nmap: Host is up (0.00072s latency).
[*] Nmap: Not shown: 977 closed tcp ports (reset)
[*] Nmap: PORT      STATE SERVICE VERSION
[*] Nmap: 21/tcp    open  ftp      vsftpd 2.3.4
[*] Nmap: |_ftp-anon: Anonymous FTP login allowed (FTP code 230)
[*] Nmap: |_ftp-syst:
[*] Nmap: |_STAT:
[*] Nmap: |_FTP server status:
[*] Nmap: |_Connected to 192.168.56.102
[*] Nmap: |_Logged in as ftp
[*] Nmap: |_TYPE: ASCII
[*] Nmap: |_No session bandwidth limit
[*] Nmap: |_Session timeout in seconds is 300
[*] Nmap: |_Control connection is plain text
[*] Nmap: |_Data connections will be plain text
[*] Nmap: |_vsFTPd 2.3.4 - secure, fast, stable
[*] Nmap: |_End of status
[*] Nmap: 22/tcp    open  ssh      OpenSSH 4.7p1 Debian 8ubuntu1 (protocol 2.0)
[*] Nmap: |_ssh-hostkey:
[*] Nmap: |_1024 60:0f:cf:e1:c0:5f:6a:74:d6:90:24:fa:c4:d5:6c:cd (DSA)
[*] Nmap: |_2048 56:56:24:0f:21:1d:de:a7:2b:ae:61:b1:24:3d:e8:f3 (RSA)
[*] Nmap: 23/tcp    open  telnet   Linux telnetd
[*] Nmap: 25/tcp    open  smtp     Postfix smtpd
[*] Nmap: |_ssl-cert: Subject: commonName=ubuntu804-base.localdomain/organizationName=OCOSA/stateOrProvinceName=There is no such thing outside US/countryName=XX
[*] Nmap: |_Not valid before: 2010-03-17T14:07:45
[*] Nmap: |_Not valid after: 2010-04-16T14:07:45
[*] Nmap: |_smtp-commands: metasploitable.localdomain, PIPELINING, SIZE 1024000, VRFY, ETRN, STARTTLS, ENHANCEDSTATUSCODES, 8BITMIME, DSN
[*] Nmap: |_ssl-date: 2025-05-02T15:23:44+00:00; 0s from scanner time.
[*] Nmap: |_sslv2:
[*] Nmap: |_SSLv2 supported
[*] Nmap: |_ciphers:
[*] Nmap: |_SSL2_RC4_128_WITH_MD5
[*] Nmap: |_SSL2_RC2_128_CBC_WITH_MD5
[*] Nmap: |_SSL2_DES_192_EDE3_CBC_WITH_MD5

```

3. Explotando vulnerabilidades

Ahora que sabemos los puertos abiertos y servicios de la máquina, podemos proceder a explotar las vulnerabilidades de esta.

3.1 Localización de exploits con searchsploit

Para localizar si alguno de los servicios de la máquina tiene exploits disponibles podemos usar searchsploit. Si queremos buscar por título del exploit podemos usar el comando searchsploit con el flag -t:

```
searchsploit -t <nombre_del_servicio>
```

Por ejemplo, si queremos buscar una vulnerabilidad para el servicio UnrealIRCd:

```
(thejuanvisu@kali)-[~]
$ searchsploit -t unrealircd
```

Exploit Title	Path
UnrealIRCd 3.2.8.1 - Backdoor Command Execution (Metasploit)	linux/remote/16922.rb
UnrealIRCd 3.2.8.1 - Local Configuration Stack Overflow	windows/dos/18011.txt
UnrealIRCd 3.2.8.1 - Remote Downloader/Execute	linux/remote/13853.pl
UnrealIRCd 3.x - Remote Denial of Service	windows/dos/27407.pl

```
Shellcodes: No Results
```

Si quisieramos buscar un exploit en función a un CVE podemos usar el comando con el flag -cve seguido de la fecha seguida de un guion y el identificador:

```
searchsploit --cve <fecha>-<identificador>
```

Por ejemplo, para buscar los exploits asociados al CVE-2010-2075:

```
(thejuanvisu@kali)-[~]
$ searchsploit --cve 2010-2075
```

Exploit Title	Path
UnrealIRCd 3.2.8.1 - Backdoor Command Execution (Metasploit)	linux/remote/16922.rb
UnrealIRCd 3.2.8.1 - Remote Downloader/Execute	linux/remote/13853.pl

```
Shellcodes: No Results

(thejuanvisu@kali)-[~]
$
```

Con los resultados obtenidos podemos ver que hay al menos 2 exploits que se podrían aplicar a esta máquina aprovechando las vulnerabilidades del servicio UnrealIRCd.

3.2 Exploit Automático con metasploit

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