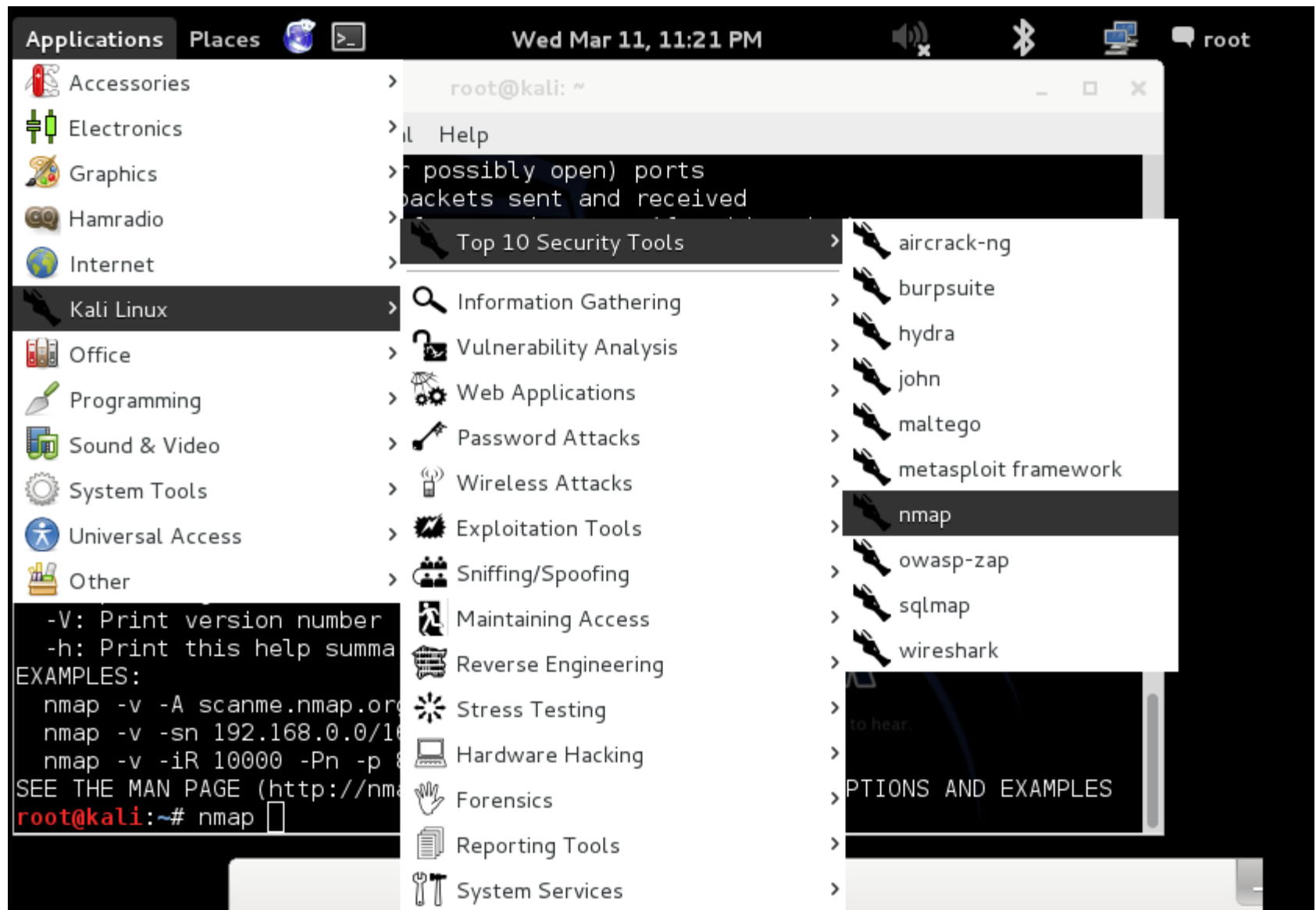


NMAP o ZENMAP Footprinting UTILIZANDO KALI

Clase practica
Jorge Gutiérrez

Cargar Kali



open (abierto)

filtered (filtrado) FIREWALL

closed (cerrado)

unfiltered (no filtrado).

open | filtered y closed | filtered

-Pn (igual -PN sin ping)

-sn (-sP solo scan ping)

-PS (TCP SYNC ping)

-PA (TCP ACK ping)

-PU (UDP ping)

-PE (ICMP Echo ping)

-PP (ICMP Timestamp ping)

-PM (ICMP Address Mask ping)

-PR (ARP ping)

--traceroute

-n (deshabilitar la resolución dns reverse)

--system-dns (alternative DNS Lookup)

--dns-servers (Manually Specify DNS server(s))

-sL (Create a Host List)

Nmap Scan	Command Syntax	Requires Privileged Access	Identifies TCP Ports	Identifies UDP Ports
TCP SYN Scan	-sS	YES	YES	NO
TCP connect() Scan	-sT	NO	YES	NO
FIN Scan	-sF	YES	YES	NO
Xmas Tree Scan	-sX	YES	YES	NO
Null Scan	-sN	YES	YES	NO
Ping Scan	-sP	NO	NO	NO
Version Detection	-sV	NO	NO	NO
UDP Scan	-sU	YES	NO	YES
IP Protocol Scan	-sO	YES	NO	NO
ACK Scan	-sA	YES	YES	NO
Window Scan	-sW	YES	YES	NO
RPC Scan	-sR	NO	NO	NO
List Scan	-sL	NO	NO	NO
Idlescan	-sI	YES	YES	NO
FTP Bounce Attack	-b	NO	YES	NO

`--resume` (scan) `--append_output`

`-iL` <targets_filename> `-p` <port ranges>

`-F` (Fast scan mode) `-D` <decoy1 [,decoy2][,ME],>

`-S` <SRC_IP_Address> `-e` <interface>

`-g` <portnumber> `--data_length` <number>

`--randomize_hosts` `-O` (OS fingerprinting) `-I` (dent-scan)

`-f` (fragmentation) `-v` (verbose) `-h` (help)

`-n` (no reverse lookup) `-R` (do reverse lookup)

`-r` (don't randomize port scan) `-b` <ftp relay host> (FTP bounce)

NMAP opciones de tiempo

-T Paranoid – serial scan & 300 sec wait

-T Sneaky - serialize scans & 15 sec wait

-T Polite - serialize scans & 0.4 sec wait

-T Normal – parallel scan

-T Aggressive- parallel scan & 300 sec timeout & 1.25 sec/probe

-T Insane - parallel scan & 75 sec timeout & 0.3 sec/probe

--host_timeout --max_rtt_timeout
(default - 9000)

--min_rtt_timeout --initial_rtt_timeout
(default - 6000)

--max_parallelism --scan_delay (between probes)



-f (Fragment packetes)

--mtu (especificar mtu)

-D (usar Decoy)

-sl (Idle Zombies Scan)

--source-port (cambiar el puerto origen)

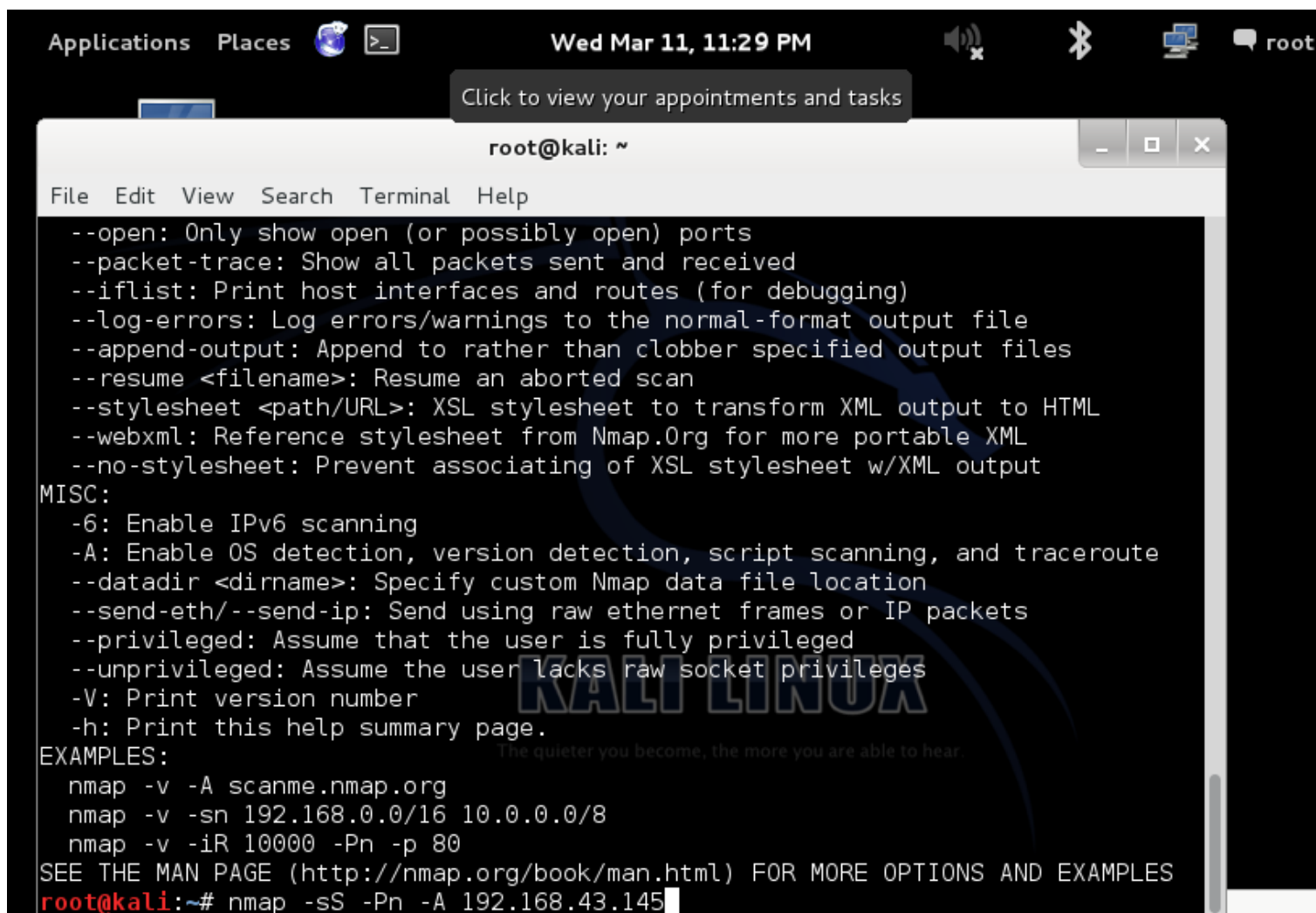
--data-length (agregar datos random)

--randomize-hosts (randon traget scan order)

--spoof-mac (mac adress falsa)

--badsum (enviar checksum malos)

Objetivo: Ver puertos abiertos servicios y versiones



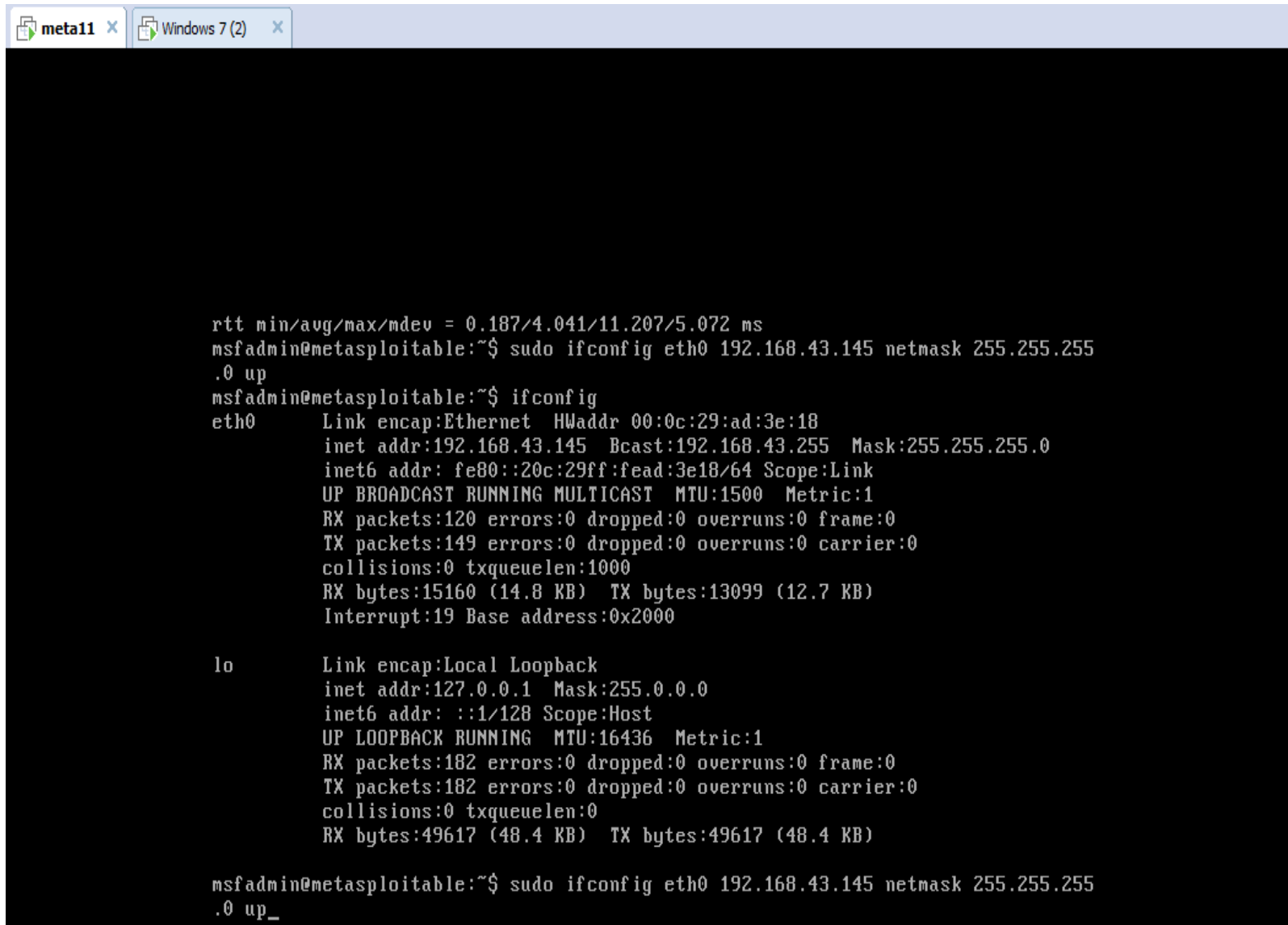
The screenshot shows a Kali Linux desktop environment. At the top, there is a taskbar with icons for Applications, Places, and a terminal icon. The system clock shows 'Wed Mar 11, 11:29 PM'. A notification bubble says 'Click to view your appointments and tasks'. The terminal window is titled 'root@kali: ~' and has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal content displays the nmap help text, including options like --open, --packet-trace, --iflist, --log-errors, --append-output, --resume, --stylesheet, --webxml, --no-stylesheet, MISC options like -6, -A, --datadir, --send-eth, --send-ip, --privileged, --unprivileged, -V, and -h. It also shows EXAMPLES and a prompt to see the man page. The command 'nmap -sS -Pn -A 192.168.43.145' is partially entered at the bottom.

```
root@kali: ~
File Edit View Search Terminal Help

--open: Only show open (or possibly open) ports
--packet-trace: Show all packets sent and received
--iflist: Print host interfaces and routes (for debugging)
--log-errors: Log errors/warnings to the normal-format output file
--append-output: Append to rather than clobber specified output files
--resume <filename>: Resume an aborted scan
--stylesheet <path/URL>: XSL stylesheet to transform XML output to HTML
--webxml: Reference stylesheet from Nmap.Org for more portable XML
--no-stylesheet: Prevent associating of XSL stylesheet w/XML output
MISC:
-6: Enable IPv6 scanning
-A: Enable OS detection, version detection, script scanning, and traceroute
--datadir <dirname>: Specify custom Nmap data file location
--send-eth/--send-ip: Send using raw ethernet frames or IP packets
--privileged: Assume that the user is fully privileged
--unprivileged: Assume the user lacks raw socket privileges
-V: Print version number
-h: Print this help summary page.
EXAMPLES:
nmap -v -A scanme.nmap.org
nmap -v -sn 192.168.0.0/16 10.0.0.0/8
nmap -v -iR 10000 -Pn -p 80
SEE THE MAN PAGE (http://nmap.org/book/man.html) FOR MORE OPTIONS AND EXAMPLES
root@kali:~# nmap -sS -Pn -A 192.168.43.145
```

PC Linux o Windows Scaneada x NMAP

Entrar a pc del METASPLOITABLE



```
meta11 x Windows 7 (2) x

rtt min/avg/max/mdev = 0.187/4.041/11.207/5.072 ms
msfadmin@metasploitable:~$ sudo ifconfig eth0 192.168.43.145 netmask 255.255.255
.0 up
msfadmin@metasploitable:~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 00:0c:29:ad:3e:18
          inet addr:192.168.43.145  Bcast:192.168.43.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:fead:3e18/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:120 errors:0 dropped:0 overruns:0 frame:0
          TX packets:149 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:15160 (14.8 KB)  TX bytes:13099 (12.7 KB)
          Interrupt:19 Base address:0x2000

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:182 errors:0 dropped:0 overruns:0 frame:0
          TX packets:182 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:49617 (48.4 KB)  TX bytes:49617 (48.4 KB)

msfadmin@metasploitable:~$ sudo ifconfig eth0 192.168.43.145 netmask 255.255.255
.0 up_
```

nmap -v //versión

nmap -vv /mas información

nmap -d //debub

nmap scanme.nmap.org //scan normal

nmap ip_metaexploitable //scan normal

nmap 10.5.27.1-100 //scan multiples tagerts normal

nmap ip -sn //Sn es ping scan, para capa 2 scanning

nmap ipmetaexploitable -A //scan de forma agresiva

nmap -Pn ip //sin ping

nmap -sn 10.5.27.0/24 //ping scan only

nmap -PS ip //tcp syn ping

nmap -PA ip //tcp ack ping

nmap -PU ip //udp ping

nmap -PE ip //icmp Echo Ping

nmap --open 192.168.1.12 //solo los puertos con estado open

nmap -PP ip //icmp timestamp Ping, esto por si los firewall bloquean icmp pero algunos si aceptan icmp timestamp requests

nmap -PM ip //icmp address mask Ping, esto por si los firewall bloquean icmp pero algunos si aceptan icmp address mask ping

nmap --traceroute scanme.nmap.org //traceroute

nmap -n ip //Disable Reverse DNS Resolution

nmap --dns-server 8.8.8.8,8.8.4.4 scanme.nmap.org //manualmente specify DNS server

nmap -T4 -p 21 192.168.1.12 evitar ids

nmap -sP 172.16.15.100-254

nmap -F 192.168.1.12 //escaneo rapido con 100 mas comun puertos

nmap -p 21 192.168.1.12 // escaneo especifico de un puerto

nmap -p 21,22,80 192.168.1.12 //ver varios puertos.

nmap -sV 192.168.1.12 //Version del servicio

nmap -sP 192.168.1.12/24 //ping sweep

nmap -O 192.168.1.12 //Sistema operativo.

nmap -sS 172.16.15.239



Access documents, folders and network places

root@kali: ~

File Edit View Search Terminal Help

```
nmap -v -sn 192.168.0.0/16 10.0.0.0/8
```

```
nmap -v -iR 10000 -Pn -p 80
```

```
SEE THE MAN PAGE (http://nmap.org/book/man.html) FOR MORE OPTIONS AND EXAMPLES
```

```
root@kali:~# nmap -sS -Pn -A 192.168.43.145
```

```
Starting Nmap 6.46 ( http://nmap.org ) at 2015-03-11 23:33 UTC
```

```
Nmap scan report for 192.168.43.145
```

```
Host is up (0.00056s latency).
```

```
Not shown: 977 closed ports
```

```
PORT      STATE SERVICE      VERSION
```

```
21/tcp    open  ftp          vsftpd 2.3.4
```

```
|_ftp-anon: Anonymous FTP login allowed (FTP code 230)
```

```
22/tcp    open  ssh          OpenSSH 4.7p1 Debian 8ubuntu1 (protocol 2.0)
```

```
|_ssh-hostkey:
```

```
|_ 1024 60:0f:cf:e1:c0:5f:6a:74:d6:90:24:fa:c4:d5:6c:cd (DSA)
```

```
|_ 2048 56:56:24:0f:21:1d:de:a7:2b:ae:61:b1:24:3d:e8:f3 (RSA)
```

```
23/tcp    open  telnet       Linux telnetd
```

```
25/tcp    open  smtp         Postfix smtpd
```

```
|_smtp-commands: metasploitable.localdomain, PIPELINING, SIZE 10240000, VRFY, ET  
RN, STARTTLS, ENHANCEDSTATUSCODES, 8BITMIME, DSN,
```

```
|_ssl-cert: Subject: commonName=ubuntu804-base.localdomain/organizationName=OCOS  
A/stateOrProvinceName=There is no such thing outside US/countryName=XX
```

```
|_Not valid before: 2010-03-17T14:07:45+00:00
```

```
|_Not valid after: 2010-04-16T14:07:45+00:00
```

Resultados usando Zenmap

Applications Places Wed Mar 11, 11:45 PM

Zenmap Output: Muted
ES1371 [AudioPCI-97] Analog Stereo

Scan Tools Profile Help


Target: 192.168.43.145 Profile: Scan Cancel

Command: `nmap -sS -Pn -A 192.168.43.145`

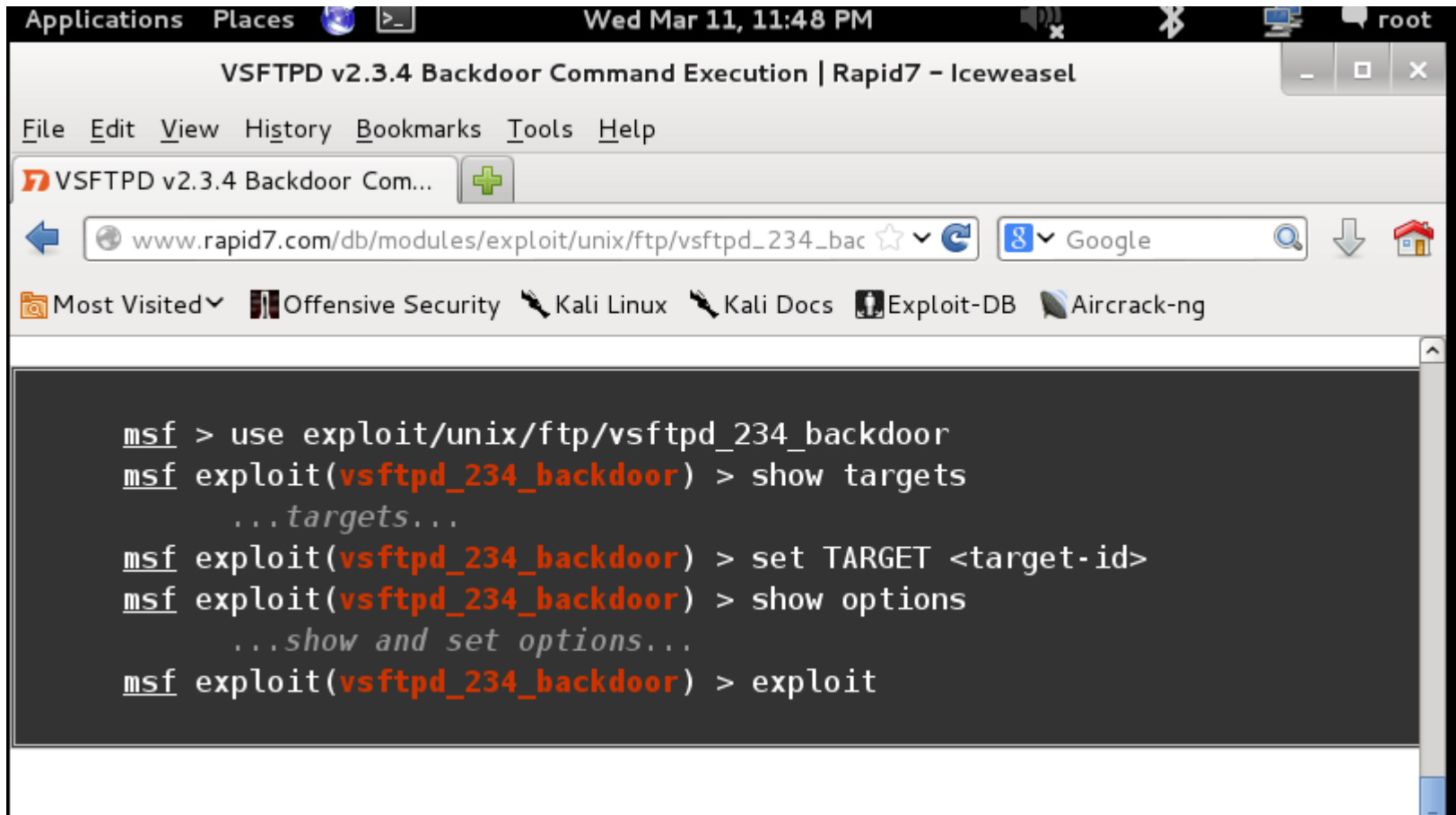
Hosts Services Nmap Output Ports / Hosts Topology Host Details Scans

OS	Host	Port	Protocol	State	Service	Version
	192.168.43.145	✓ 21	tcp	open	ftp	vsftpd 2.3.4
		✓ 22	tcp	open	ssh	OpenSSH 4.7p1 Det
		✓ 23	tcp	open	telnet	Linux telnetd
		✓ 25	tcp	open	smtp	Postfix smtpd
		✓ 53	tcp	open	domain	ISC BIND 9.4.2
		✓ 80	tcp	open	http	Apache httpd 2.2.8 (
		✓ 111	tcp	open	rpcbind	2 (RPC #100000)
		✓ 139	tcp	open	netbios-ssn	Samba smbd 3.X (wo
		✓ 445	tcp	open	netbios-ssn	Samba smbd 3.X (wo
		✓ 512	tcp	open	exec	netkit-rsh rexecd
		✓ 513	tcp	open	login	

Filter Hosts



Una vez teniendo lo que requerido, busco el vsftpd 2.3.4 exploit y listo.



```
msf > use exploit/unix/ftp/vsftpd_234_backdoor
msf exploit(vsftpd_234_backdoor) > show targets
...targets...
msf exploit(vsftpd_234_backdoor) > set TARGET <target-id>
msf exploit(vsftpd_234_backdoor) > show options
...show and set options...
msf exploit(vsftpd_234_backdoor) > exploit
```

Network Scanner

En kali

Network Scanner

Usando Netdiscover

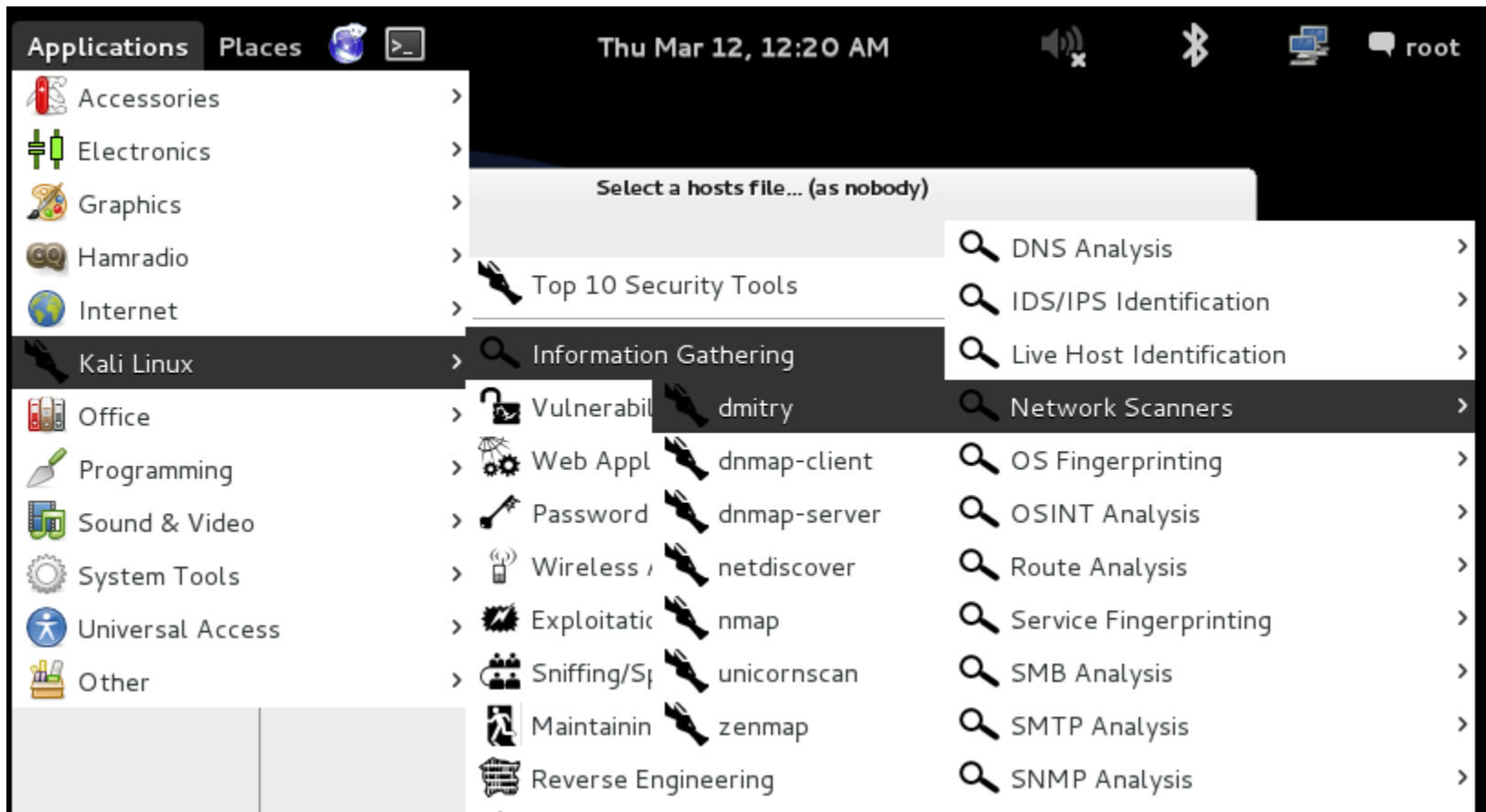
```
Click to view your appointments and tasks
root@kali:~# netdiscover -i eth0 -r 192.168.235.0/24

File Edit View Search Terminal Help
Currently scanning: Finished! | Screen View: Unique Hosts
4 Captured ARP Req/Rep packets, from 4 hosts. Total size: 240

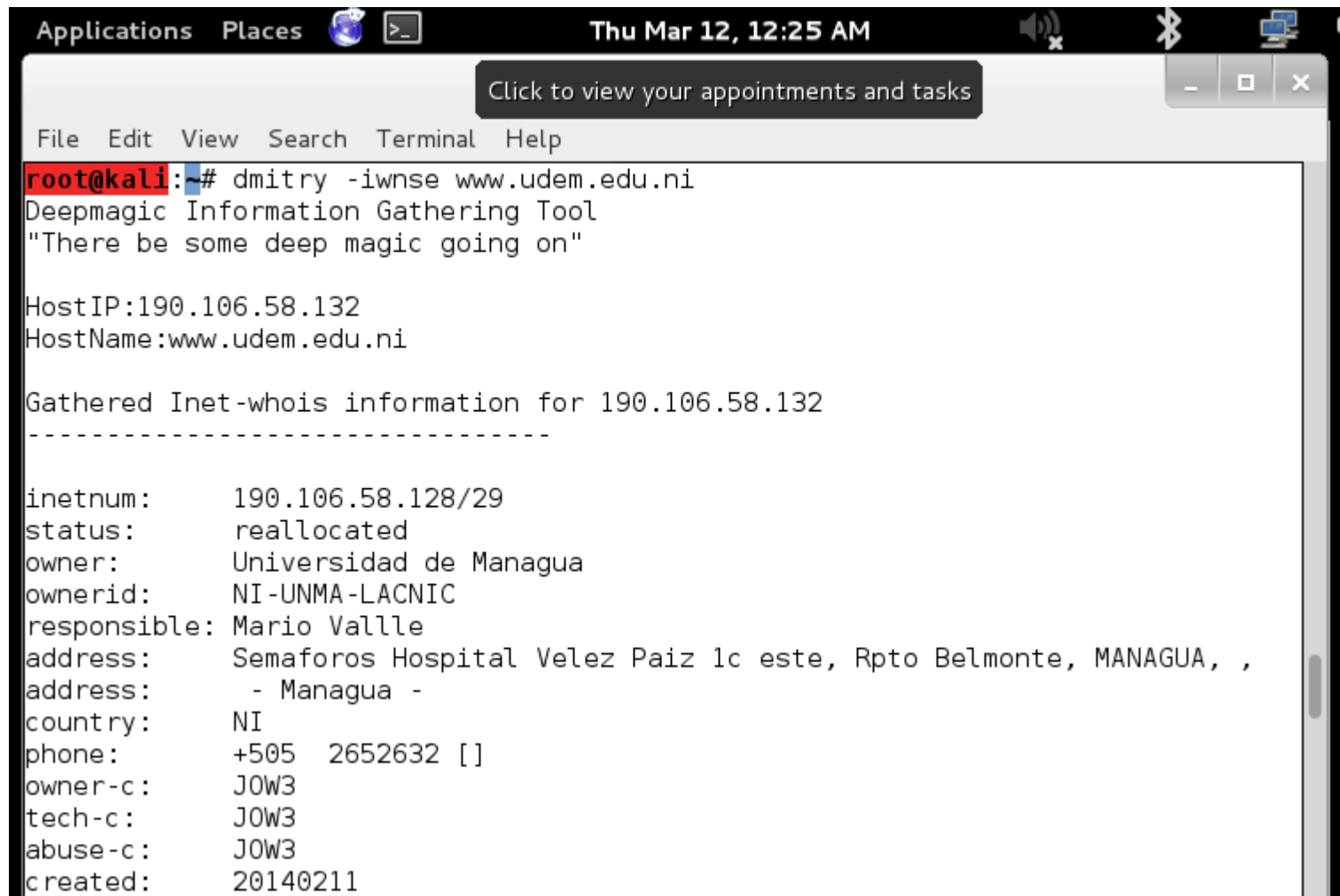
-----
IP           At MAC Address      Count  Len  MAC Vendor
-----
192.168.235.1 00:50:56:c0:00:08    01    060  VMWare, Inc.
192.168.235.2 00:50:56:f7:7a:1a    01    060  VMWare, Inc.
192.168.235.129 00:0c:29:1d:99:4e    01    060  VMware, Inc.
192.168.235.254 00:50:56:f2:a3:27    01    060  VMWare, Inc.

root@kali:~# netdiscover -i eth0 -r 192.168.235.0/24
```

Para Hacer un whois de un dominio utilizando dmitry



Resultados del scan.








The image shows a terminal window on a Kali Linux system. The window title bar includes 'Applications', 'Places', and system icons for volume, Bluetooth, and network. The terminal output shows the execution of the 'dmitry' tool against the IP address 190.106.58.132. The tool identifies the host as 'www.udem.edu.ni' and provides detailed WHOIS information for the IP range 190.106.58.128/29, including the owner 'Universidad de Managua' and contact details.

```
root@kali:~# dmitry -iwnse www.udem.edu.ni
Deepmagic Information Gathering Tool
"There be some deep magic going on"

HostIP:190.106.58.132
HostName:www.udem.edu.ni

Gathered Inet-whois information for 190.106.58.132
-----

inetnum:      190.106.58.128/29
status:       reallocated
owner:        Universidad de Managua
ownerid:      NI-UNMA-LACNIC
responsible:  Mario Vallle
address:      Semaforos Hospital Velez Paiz 1c este, Rpto Belmonte, MANAGUA, ,
address:      - Managua -
country:      NI
phone:        +505 2652632 []
owner-c:      JOW3
tech-c:       JOW3
abuse-c:      JOW3
created:      20140211
```

Applications Places   Thu Mar 12, 12:27 AM   

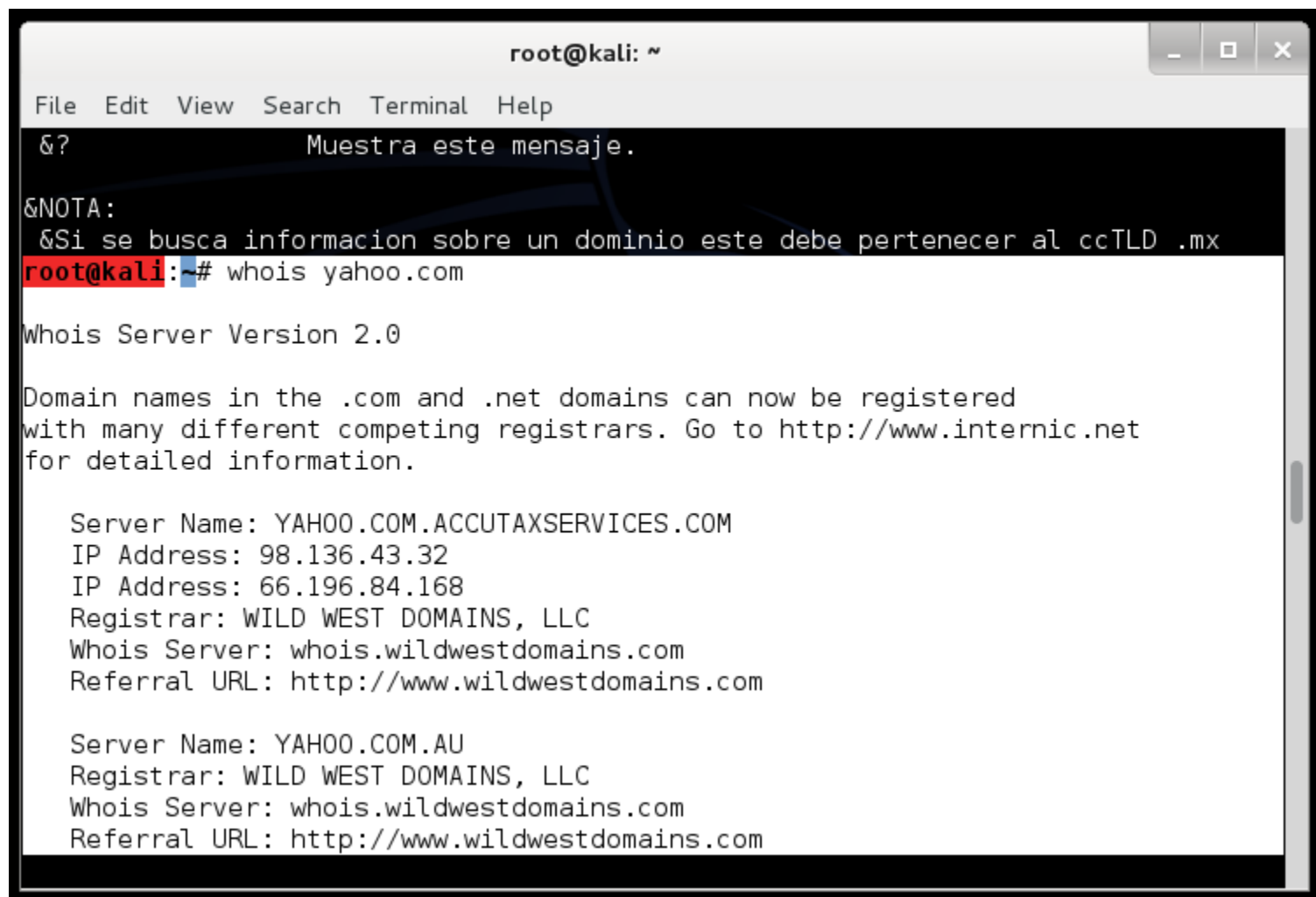
root@kali: ~

File Edit View Search Terminal Help

```
HostIP:190.106.58.132
HostName:leninvasquez.udem.edu.ni
HostIP:190.106.58.132
HostName:guillermogarcia.udem.edu.ni
HostIP:190.106.58.132
HostName:pabloemiliohurtado.udem.edu.ni
HostIP:190.106.58.132
HostName:raulvega.udem.edu.ni
HostIP:190.106.58.132
HostName:profmariocabrera.udem.edu.ni
HostIP:190.106.58.132
HostName:lyzbethflores.udem.edu.ni
HostIP:190.106.58.132
HostName:belenmercado.udem.edu.ni
HostIP:190.106.58.132
HostName:juancarlosrochaortiz.udem.edu.ni
HostIP:190.106.58.132
HostName:carlosroman.udem.edu.ni
HostIP:190.106.58.132
HostName:noelmartinez.udem.edu.ni
HostIP:190.106.58.132
HostName:marbeliduarte.udem.edu.ni
HostIP:190.106.58.132
```

KALI LINUX
The quieter you become, the more you are able to hear.

Who IS en Kali



The image shows a terminal window titled 'root@kali: ~'. The window has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal content is as follows:

```
&? Muestra este mensaje.  
&NOTA:  
&Si se busca informacion sobre un dominio este debe pertenecer al ccTLD .mx  
root@kali:~# whois yahoo.com  
  
Whois Server Version 2.0  
  
Domain names in the .com and .net domains can now be registered  
with many different competing registrars. Go to http://www.internic.net  
for detailed information.  
  
Server Name: YAH00.COM.ACCUTAXSERVICES.COM  
IP Address: 98.136.43.32  
IP Address: 66.196.84.168  
Registrar: WILD WEST DOMAINS, LLC  
Whois Server: whois.wildwestdomains.com  
Referral URL: http://www.wildwestdomains.com  
  
Server Name: YAH00.COM.AU  
Registrar: WILD WEST DOMAINS, LLC  
Whois Server: whois.wildwestdomains.com  
Referral URL: http://www.wildwestdomains.com
```

```
root@kali: ~  
File Edit View Search Terminal Help  
Server Name: YAH00.COM.ZZZZZZ.MORE.INFO.AT.WWW.BEYONDWHOIS.COM  
IP Address: 203.36.226.2  
Registrar: INSTRA CORPORATION PTY, LTD.  
Whois Server: whois.instra.net  
Referral URL: http://www.instra.com  
  
Server Name: YAH00.COM.ZZZZZZZ.GET.ONE.MILLION.DOLLARS.AT.WWW.UNIMUNDI.COM  
IP Address: 209.126.190.70  
Registrar: PDR LTD. D/B/A PUBLICDOMAINREGISTRY.COM  
Whois Server: whois.PublicDomainRegistry.com  
Referral URL: http://www.PublicDomainRegistry.com  
  
Domain Name: YAH00.COM  
Registrar: MARKMONITOR INC.  
Sponsoring Registrar IANA ID: 292  
Whois Server: whois.markmonitor.com  
Referral URL: http://www.markmonitor.com  
Name Server: NS1.YAH00.COM  
Name Server: NS2.YAH00.COM  
Name Server: NS3.YAH00.COM  
Name Server: NS4.YAH00.COM  
Name Server: NS5.YAH00.COM  
Status: clientDeleteProhibited http://www.icann.org/epp#clientDeleteProhibite
```


Footprinting con dnsenum

```
root@kali: /usr/share/dnsenum
File Edit View Search Terminal Help
root@kali:/usr/share/dnsenum# dnsenum --enum udem.edu.ni
dnsenum.pl VERSION:1.2.3
Warning: can't load Net::Whois::IP module, whois queries disabled.

----- udem.edu.ni -----

Host's addresses:
-----
udem.edu.ni. 5 IN A 190.106.58.132

Name Servers:
-----
ns1.udem.edu.ni. 5 IN A 190.106.58.132
ns2.udem.edu.ni. 5 IN A 190.106.58.133

Mail (MX) Servers:
-----
aspmx3.googlemail.com. 5 IN A 64.233.186.27
```

Footprinting

```
root@kali: /usr/bin
File Edit View Search Terminal Help
Output: Muted
ES1371 [AudioPCI-97] Analog Stereo

-v Show attempts in the bruteforce modes.
root@kali: /usr/bin# ./dnsrecon -d udem.edu.ni
[*] Performing General Enumeration of Domain: udem.edu.ni
[-] DNSSEC is not configured for udem.edu.ni
[*] SOA ns1.udem.edu.ni 190.106.58.132
[*] NS ns1.udem.edu.ni 190.106.58.132
[*] NS ns2.udem.edu.ni 190.106.58.133
[-] Recursion enabled on NS Server 190.106.58.133
[*] Bind Version for 190.106.58.133 dnsmasq-2.75
[*] MX aspmx3.googlemail.com 64.233.190.26
[*] MX alt1.aspmx.l.google.com 173.194.211.27
[*] MX alt2.aspmx.l.google.com 64.233.190.27
[*] MX aspmx.l.google.com 74.125.30.27
[*] MX aspmx2.googlemail.com 173.194.211.26
[*] MX aspmx3.googlemail.com 2800:3f0:4003:c01::1b
[*] MX alt1.aspmx.l.google.com 2607:f8b0:4002:c09::1a
[*] MX alt2.aspmx.l.google.com 2800:3f0:4003:c01::1b
[*] MX aspmx.l.google.com 2607:f8b0:4002:c06::1b
[*] MX aspmx2.googlemail.com 2607:f8b0:400c:c10::1a
[*] A udem.edu.ni 190.106.58.132
[*] Enumerating SRV Records
```

Footprinting

```
root@kali:/usr/bin# ./dnsmap google.com
dnsmap 0.30 - DNS Network Mapper by pagvac (gnucitizen.org)

[+] searching (sub)domains for google.com using built-in wordlist
[+] using maximum random delay of 10 millisecond(s) between requests

accounts.google.com
IPv6 address #1: 2607:f8b0:4008:80b::200d

accounts.google.com
IP address #1: 216.58.192.109

admin.google.com
IPv6 address #1: 2607:f8b0:4008:80b::200e

admin.google.com
IP address #1: 190.212.166.35
IP address #2: 190.212.166.24
IP address #3: 190.212.166.25
```

Footprinting

```
root@kali:/usr/bin# fierce -dns udem.edu.ni
```

```
DNS Servers for udem.edu.ni:
```

```
ns2.udem.edu.ni
```

```
ns1.udem.edu.ni
```

```
Trying zone transfer first...
```

```
Testing ns2.udem.edu.ni
```

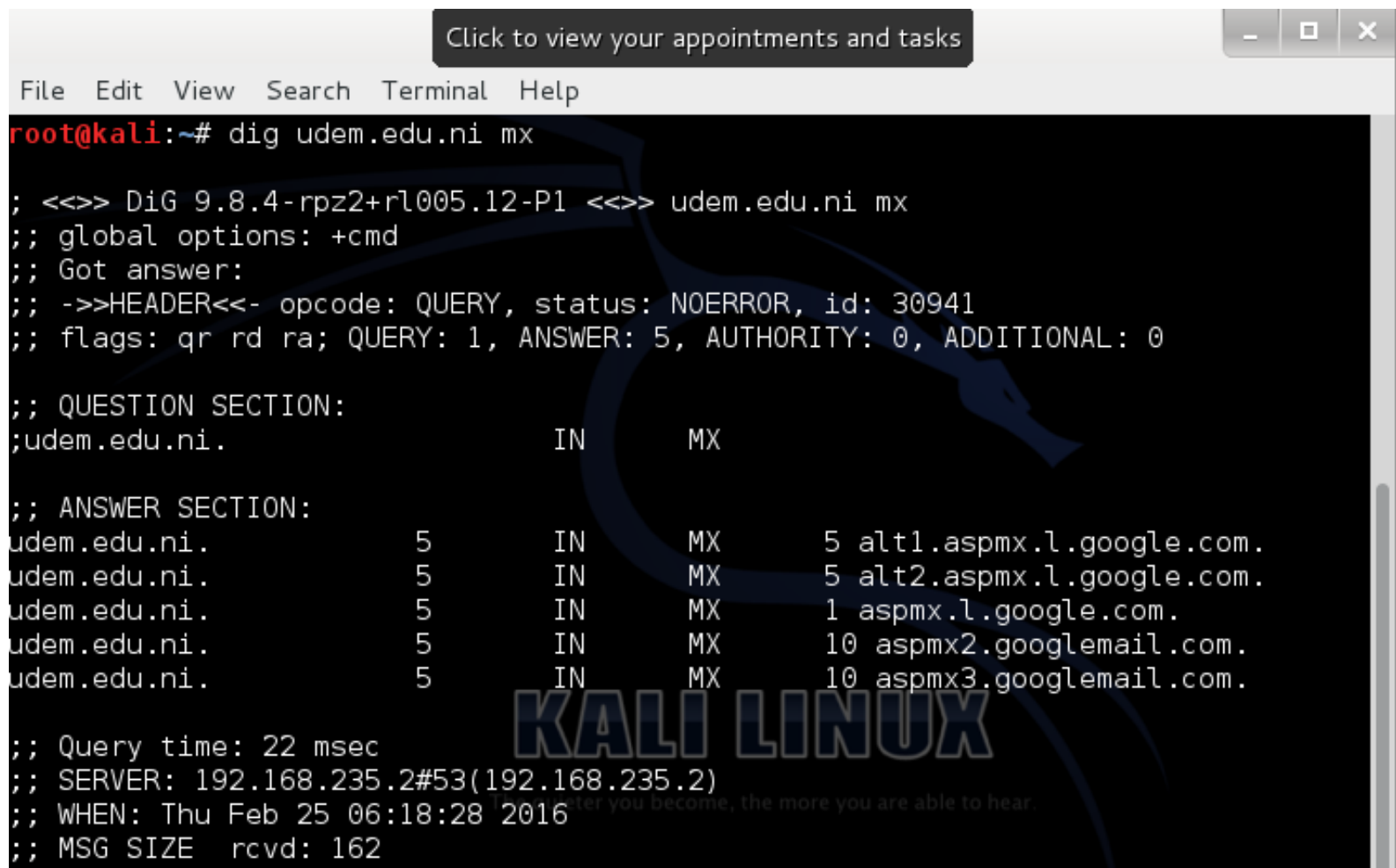
```
Request timed out or transfer not allowed.
```

```
Testing ns1.udem.edu.ni
```

```
Whoah, it worked - misconfigured DNS server found:
```

```
udem.edu.ni. 3600 IN SOA ns1.udem.edu.ni. webmaster.udem.edu.ni. (  
2012074317 ; Serial  
900 ; Refresh  
600 ; Retry  
86400 ; Expire
```

Footprinting



A terminal window titled "Click to view your appointments and tasks" with standard window controls. The terminal shows a command prompt for root@kali and the execution of a dig command to query MX records for udem.edu.ni. The output includes header information, a question section, an answer section listing five MX records with their priorities and hostnames, and query statistics.

```
root@kali:~# dig udem.edu.ni mx

; <<>> DiG 9.8.4-rpz2+rl005.12-P1 <<>> udem.edu.ni mx
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 30941
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 0

;; QUESTION SECTION:
;udem.edu.ni.                IN      MX

;; ANSWER SECTION:
udem.edu.ni.                5       IN      MX      5 alt1.aspmx.l.google.com.
udem.edu.ni.                5       IN      MX      5 alt2.aspmx.l.google.com.
udem.edu.ni.                5       IN      MX      1 aspmx.l.google.com.
udem.edu.ni.                5       IN      MX      10 aspmx2.googlemail.com.
udem.edu.ni.                5       IN      MX      10 aspmx3.googlemail.com.

;; Query time: 22 msec
;; SERVER: 192.168.235.2#53(192.168.235.2)
;; WHEN: Thu Feb 25 06:18:28 2016
;; MSG SIZE rcvd: 162
```

Footprinting

```
root@kali:~# tcptraceroute www.udem.edu.ni
traceroute to www.udem.edu.ni (190.106.58.132), 30 hops max, 60 byte packets
 1  192.168.235.2 (192.168.235.2)  0.308 ms  0.232 ms  0.218 ms
 2  host-132-58-106-190.ibw.com.ni (190.106.58.132) <syn,ack>  82.137 ms  83.117
ms  87.986 ms
root@kali:~# itrace -i eth0 -d www.yahoo.com
1(1)  [192.168.235.2]
```

dmitry -iwnse targetdomain

dmitry -s yahoo.com //subdominios

dmitry -i udem.edu.ni//con whois ip

dmitry -w targetdomain//con whois domain

dmitry -p targetdomain //TCP port scan

dmitry -wnsepb udem.edu.ni

Whois yahoo.com

```
Cd /usr/share/dnenum/ Dnenum -enum udem.edu.ni
Dnenum yahoo.com
```

```
Dnenum -help
Dnenum -enum google //equivalente treat 5
```

```
Tool para investigar servidores dns
Cd /usr/bin ./dnsrecon -d google.com
./dnsrecon -h udem.edu.ni

./dnsmap google.com
```

```
Fierce scan de dominio
fierce -dns google.com
Fierce -dns udem.com
```

```
Traza
Tcptraceroute www.yahoo.com
```

```
dig google.com
dig google.com MX
dig google.com -t MX
dig google.com AAAA
dig +qr google.com any
```

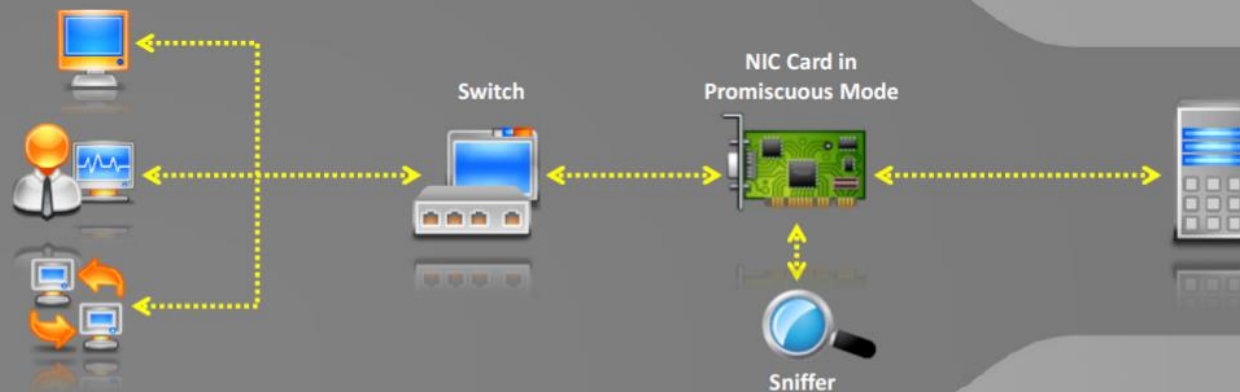

SNIFING

How a Sniffer Works

CEH
Certified Ethical Hacker

Promiscuous Mode

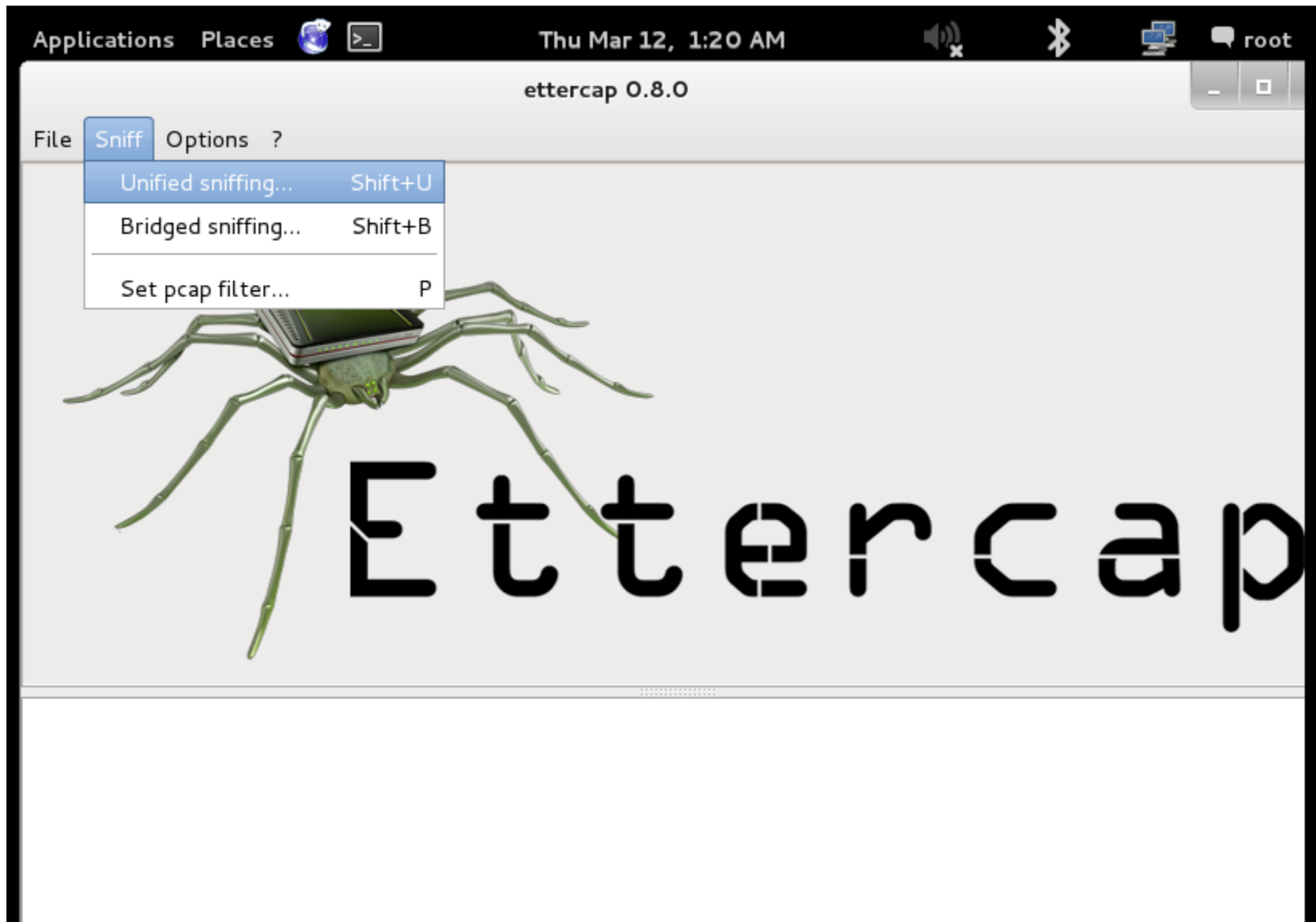
Sniffer turns the NIC of a system to the **promiscuous mode** so that it listens to all the data transmitted on its segment



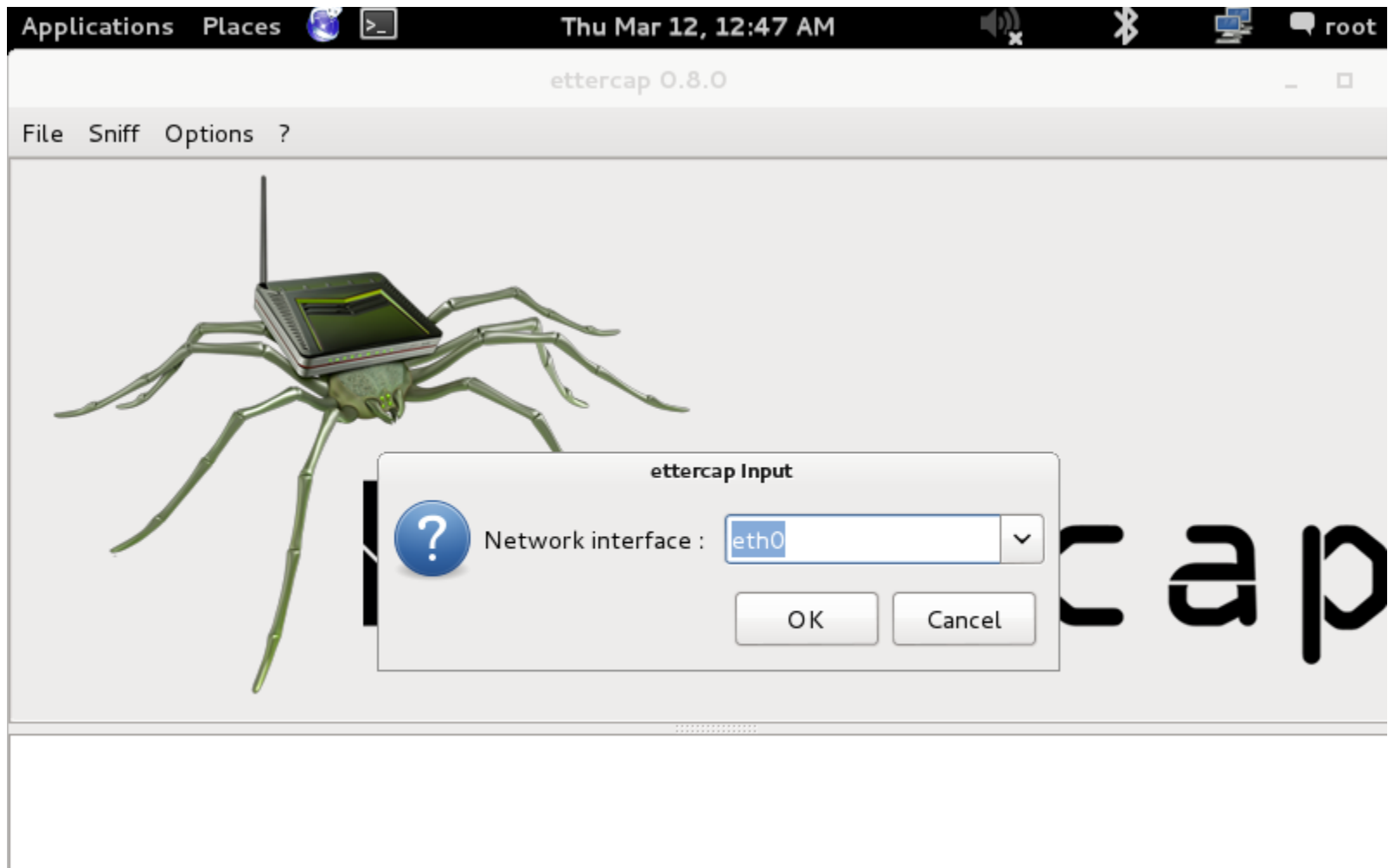
A sniffer can constantly monitor all the network traffic to a computer through the NIC by **decoding the information** encapsulated in the data packet

Decode Information

SNIFER en kali ettercap



Seleccionar la interfaz para toda la red



Applications

Places



Thu Mar 12, 1:23 AM



root

ettercap 0.8.0

Start

Targets

Hosts

View

Mitm

Filters

Logging

Plugins

?

Start sniffing Ctrl+W

Stop sniffing Ctrl+E

Exit Ctrl+X

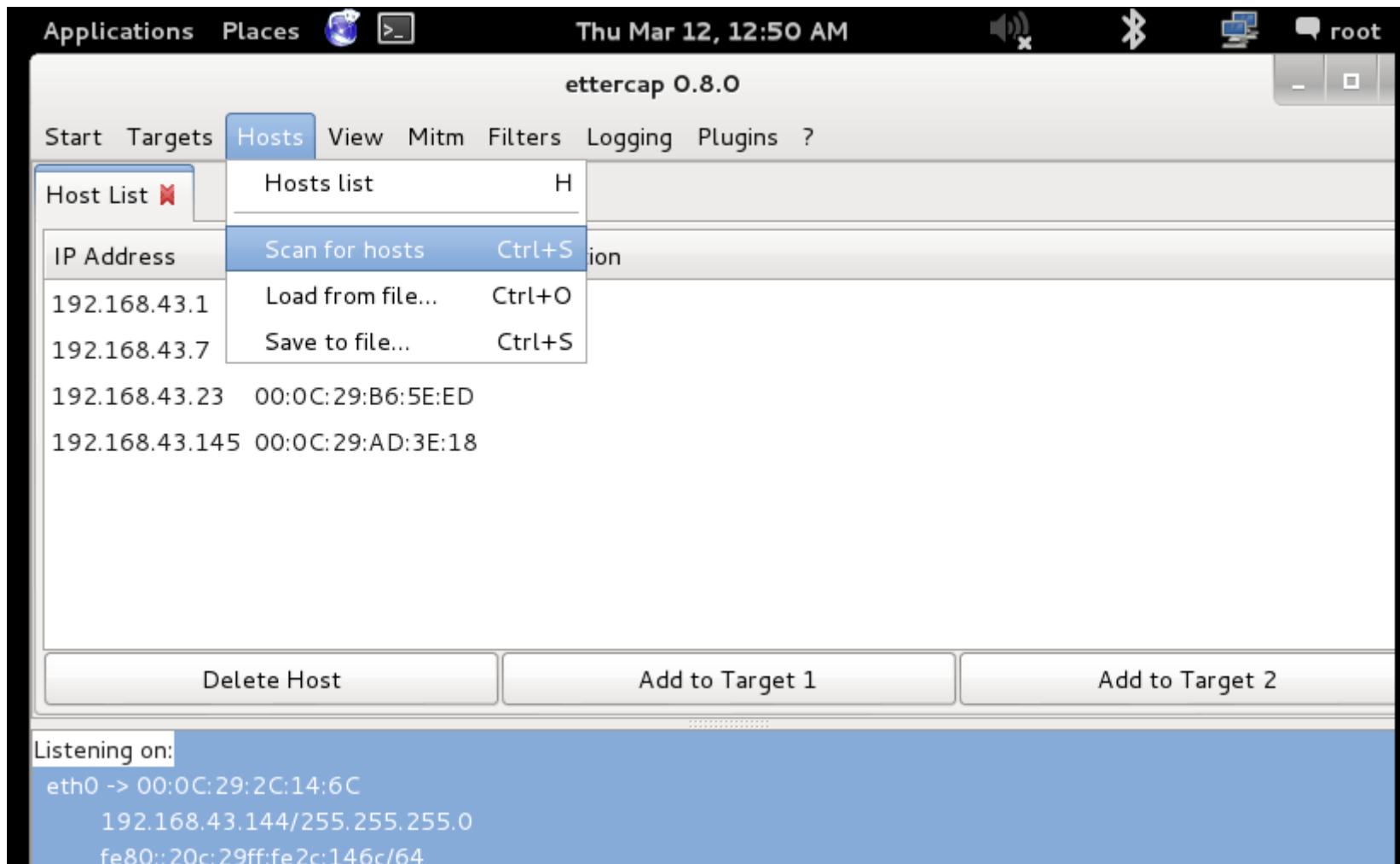
57 ports monitored

16074 mac vendor fingerprint

1766 tcp OS fingerprint

2182 known services

Starting Unified sniffing...



ettercap 0.8.0

Output: Muted

ES1371 [AudioPCI-97] Analog Stereo

Start Targets Hosts View Mitm Filters Logging Plugins ?

Host List

Connections

Statistics

Host	Port	-	Host	Port	Proto	State	Bytes
192.168.43.144	46856	-	192.168.43.145	23	T	idle	146
192.168.43.145	138	-	192.168.43.255	138	U	idle	459
192.168.43.144	40029	-	192.168.43.1	53	U		
192.168.43.144	39559	-	192.168.43.1	53	U		
192.168.43.144	43611	-	192.168.43.1	53	U		
192.168.43.144	46073	-	192.168.43.1	53	U		
192.168.43.144	54807	-	192.168.43.1	53	U		

View Details

Kill Connection

Randomizing 255 hosts for scanning...

Scanning the whole netmask for 255 hosts...

4 hosts added to the hosts list...

Randomizing 255 hosts for scanning...

Scanning the whole netmask for 255 hosts...

4 hosts added to the hosts list...

Starting Unified sniffing...

Connection Details (as nobody)

Source MAC address : 00:0C:29:2C:14:6C

Destination MAC address : 00:0C:29:AD:3E:18

Source IP address : 192.168.43.144

Destination IP address : 192.168.43.145

Protocol: TCP

Source port: 46856

Destination port: 23 telnet

Transferred bytes: 1469

Close



ettercap 0.8.0

Start Targets Hosts View Mitm Filters Logging Plugins ?

Host List

Connections

Statistics

Profiles

IP Address

Hostname

23.201.103.90 api.bing.com

204.79.197.200 www.bing.com

54.225.181.150 ping.chartbeat.net

131.253.61.98 login.live.com

108.162.232.201 ocsp.msocsp.com

63.245.216.132 addons.mozilla.org

205.234.175.175 crl4.digicert.com

63.245.217.115 blocklist.addons.mozilla.org

208.80.154.234 bits.wikimedia.org

208.80.154.240 upload.wikimedia.org

Purge Local

Purge Remote

Convert to Host List

Dump to File

Listening on:

eth0 -> 00:0C:29:2C:14:6C

192.168.43.144/255.255.255.0

fe80::20c:29ff:fe2c:146c/64

ApplicationsPlaces

Thu Mar 12, 1:18 AM

Click to view your appointments and tasks

StartTargetsHostsViewMitmFiltersLoggingPlugins ?

Host List

Connections

Statistics

Profiles

Connection data






Host	Port	-	Host	Port	Proto	State	Bytes
192.168.43.144	47160	-	192.168.43.145	23	T	closed	143
192.168.43.144	47161	-	192.168.43.145	23	T	idle	175
192.168.43.23	138	-	192.168.43.255	138	U	idle	201
192.168.43.7	68	-	255.255.255.255	67	U	idle	600
192.168.43.7	64738	-	224.0.0.252	5355	U	idle	44
192.168.43.7	137	-	192.168.43.255	137	U	active	2250
192.168.43.7	52491	-	224.0.0.252	5355	U	idle	44
192.168.43.7	60840	-	224.0.0.252	5355	U	idle	44
192.168.43.7	56432	-	224.0.0.252	5355	U	idle	44
192.168.43.7	55543	-	224.0.0.252	5355	U	idle	44

View Details

Kill Connection






Expunge Connections

DHCP: [192.168.43.1] ACK : 0.0.0.0 255.255.255.0 GW 192.168.43.1 DNS 192.168.43.1
Unified sniffing was stopped.

Applications Places   Thu Mar 12, 1:16 AM    root

ettercap 0.8.0

Start Targets Hosts View Mitm Filters Logging Plugins ?

Host List  Connections  Statistics  Profiles  **Connection data **

192.168.43.144:47161

```
.....!..."'.....#....P..... .38
400,38400....#.localhost:0.0....'..DISPLA
Y.localhost:0.0.....xterm.....msfadmin
n..msadmin..msa.fadmin..msfadmin..ls..cd v
ul      ..ls..
```

192.168.43.145:23

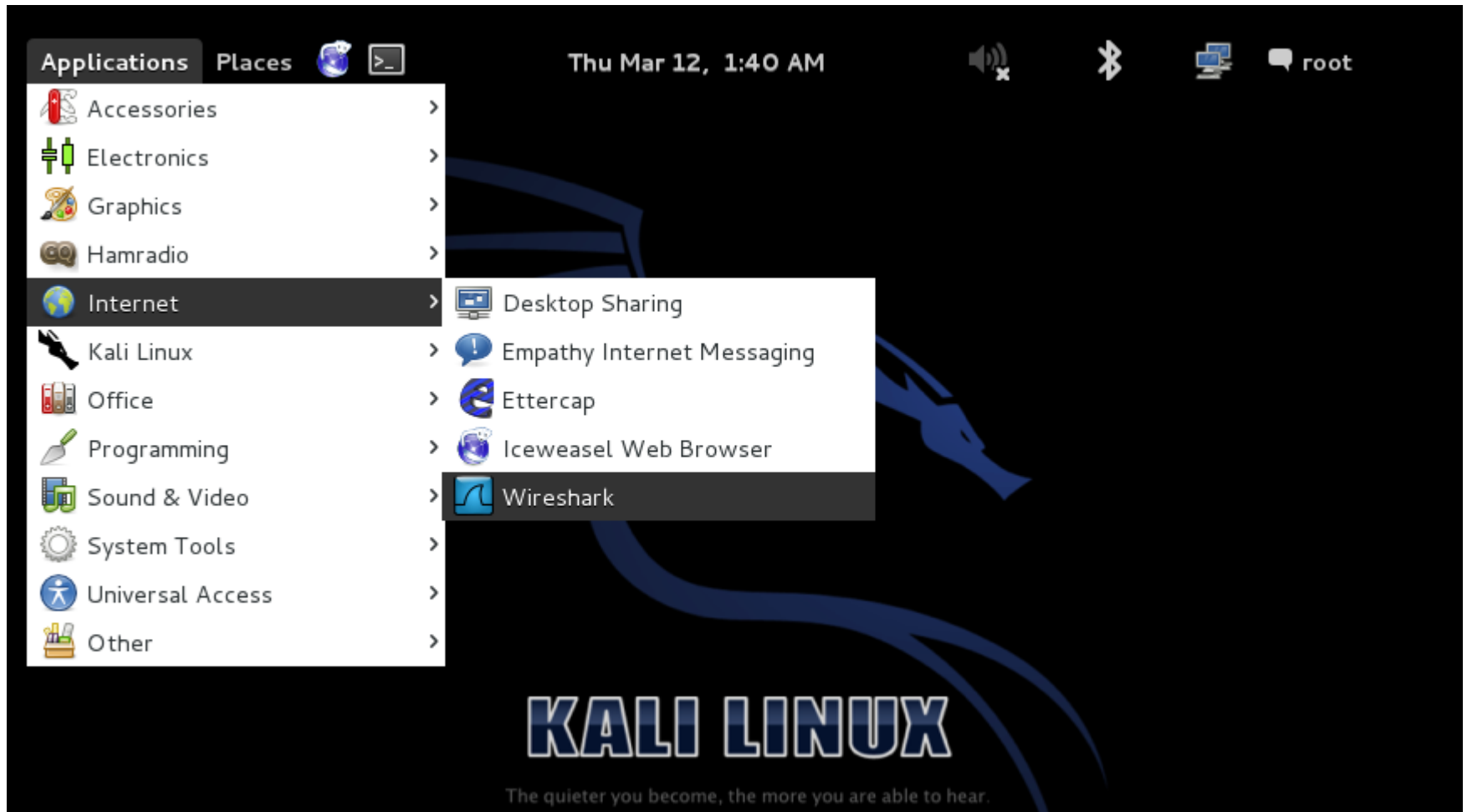
```
.
To access official Ubuntu documentatio
n, please visit:.
http://help.ubuntu.com/.
No mail..
msfadmin@metasploitable:~$ ls.
puertos vulnerable.
msfadmin@metasploitable:~$ cd vulnerabl
e/.
msfadmin@metasploitable:~/vulnerable$ l
s.
mysql-ssl samba tikiwiki twiki2003020
1.
msfadmin@metasploitable:~/vulnerable$
```

Join Views Inject Data Inject File Kill Connection

DHCP: [192.168.43.1] ACK : 0.0.0.0 255.255.255.0 GW 192.168.43.1 DNS 192.168.43.1

Unified sniffing was stopped.

Wireshark desde Kali





Wireshark: Capture Interfaces

	Device	Description	IP	Packets	Packets/s
<input checked="" type="checkbox"/>	eth0		192.168.43.144	1	1
<input type="checkbox"/>	nflog		none	0	0
<input type="checkbox"/>	any		none	1	1
<input type="checkbox"/>	lo		127.0.0.1	0	0

Help

Start

Stop

Options

Close

Interface List



Live list of the capture interfaces
(counts incoming packets)



Start

Choose one or more interfaces to capture from, then **Start**

eth0

nflog

anv

Open



Open a previously captured file

Open Recent:



Sample Captures

A rich assortment of example capture files on the wiki

Ready to load or capture

No Packets

Profile: Default

[root@k...

[root@k...

[root@k...

[La Pren...

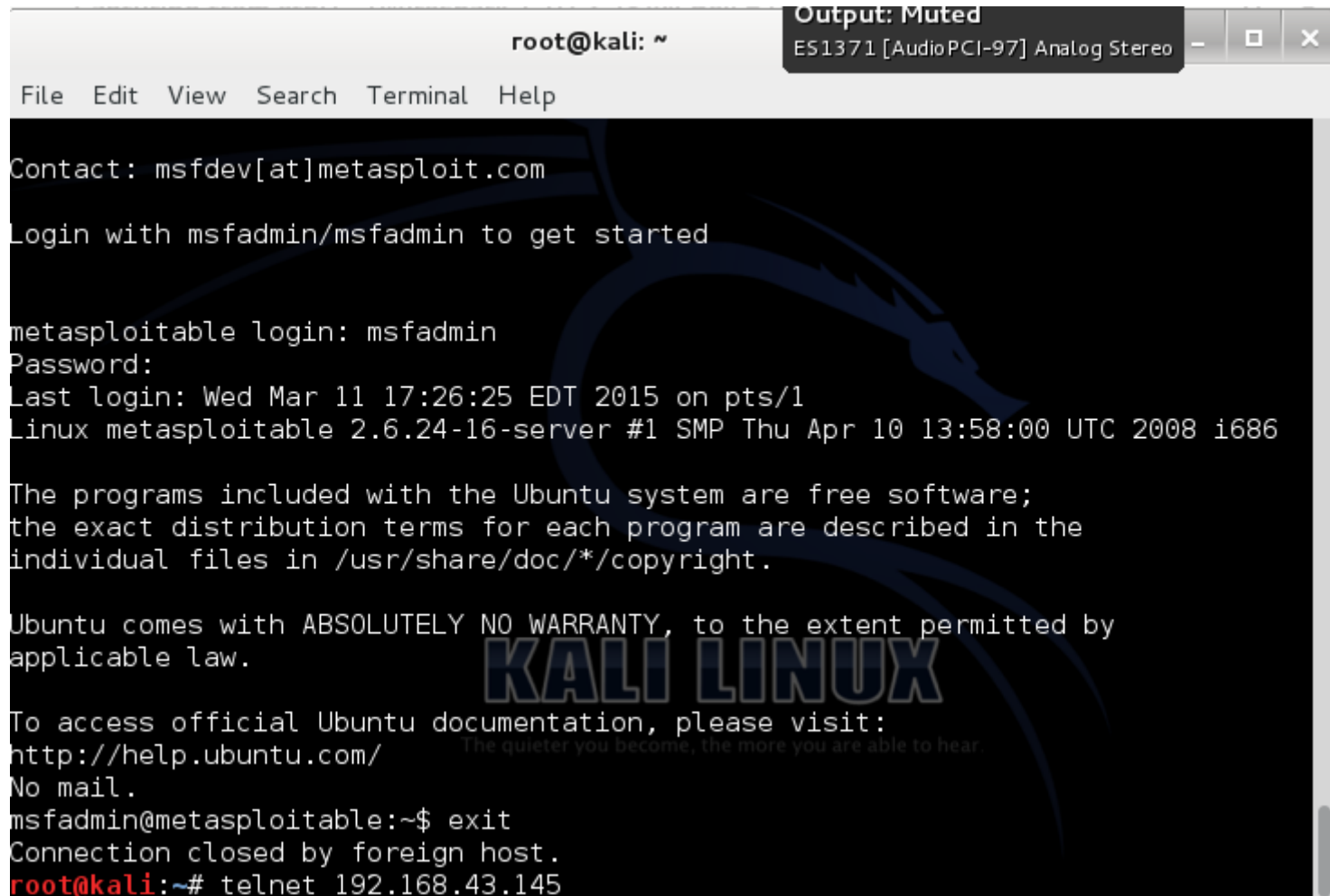
The Wir...

Wiresha...



Wireshark desde Kali

Hacer un telnet al server



A terminal window titled 'root@kali: ~' with a menu bar (File, Edit, View, Search, Terminal, Help). The window shows a telnet session to a Metasploitable server. The output is as follows:

```
Output: Muted
ES1371 [AudioPCI-97] Analog Stereo

Contact: msfdev[at]metasploit.com

Login with msfadmin/msfadmin to get started

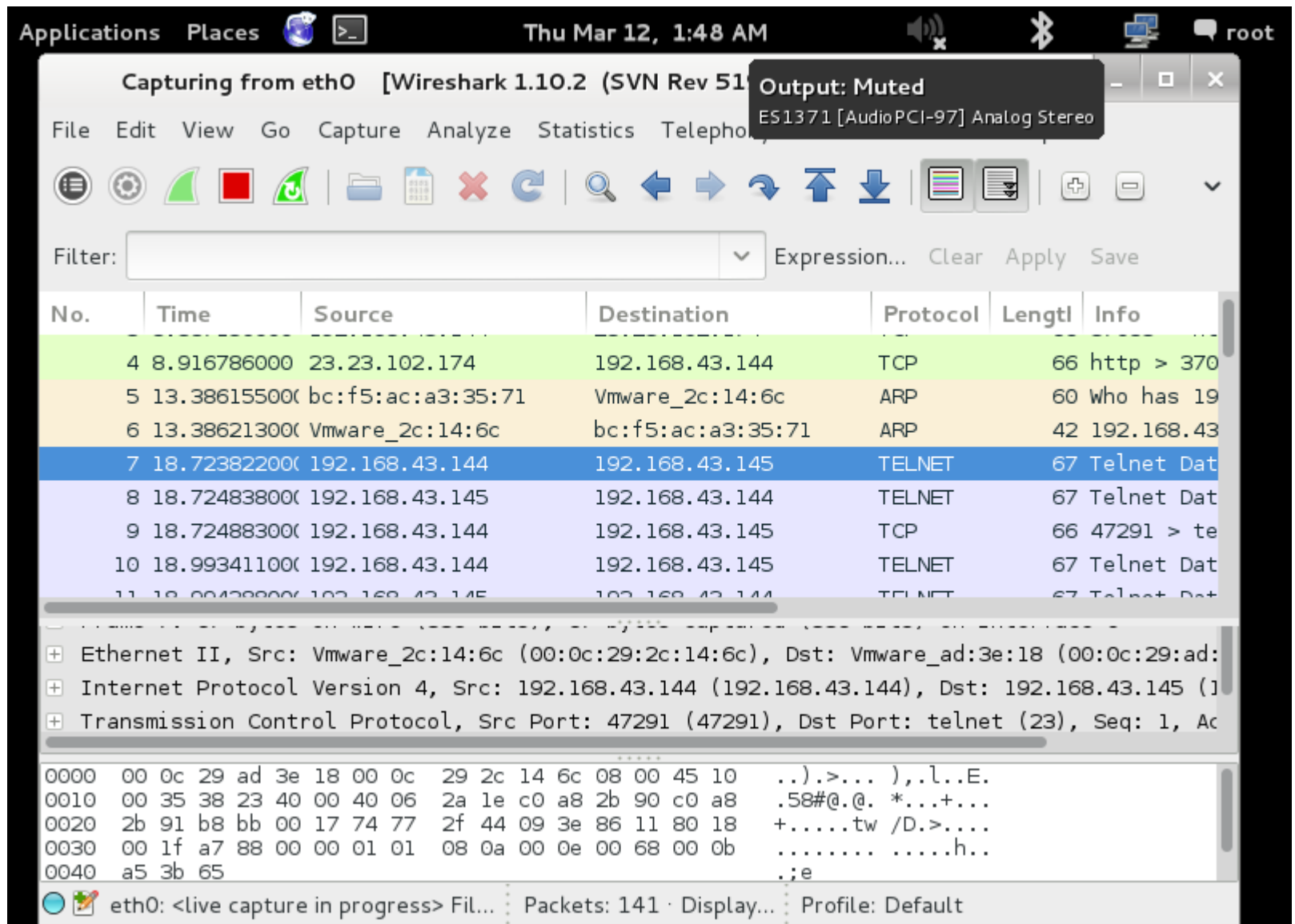
metasploitable login: msfadmin
Password:
Last login: Wed Mar 11 17:26:25 EDT 2015 on pts/1
Linux metasploitable 2.6.24-16-server #1 SMP Thu Apr 10 13:58:00 UTC 2008 i686

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

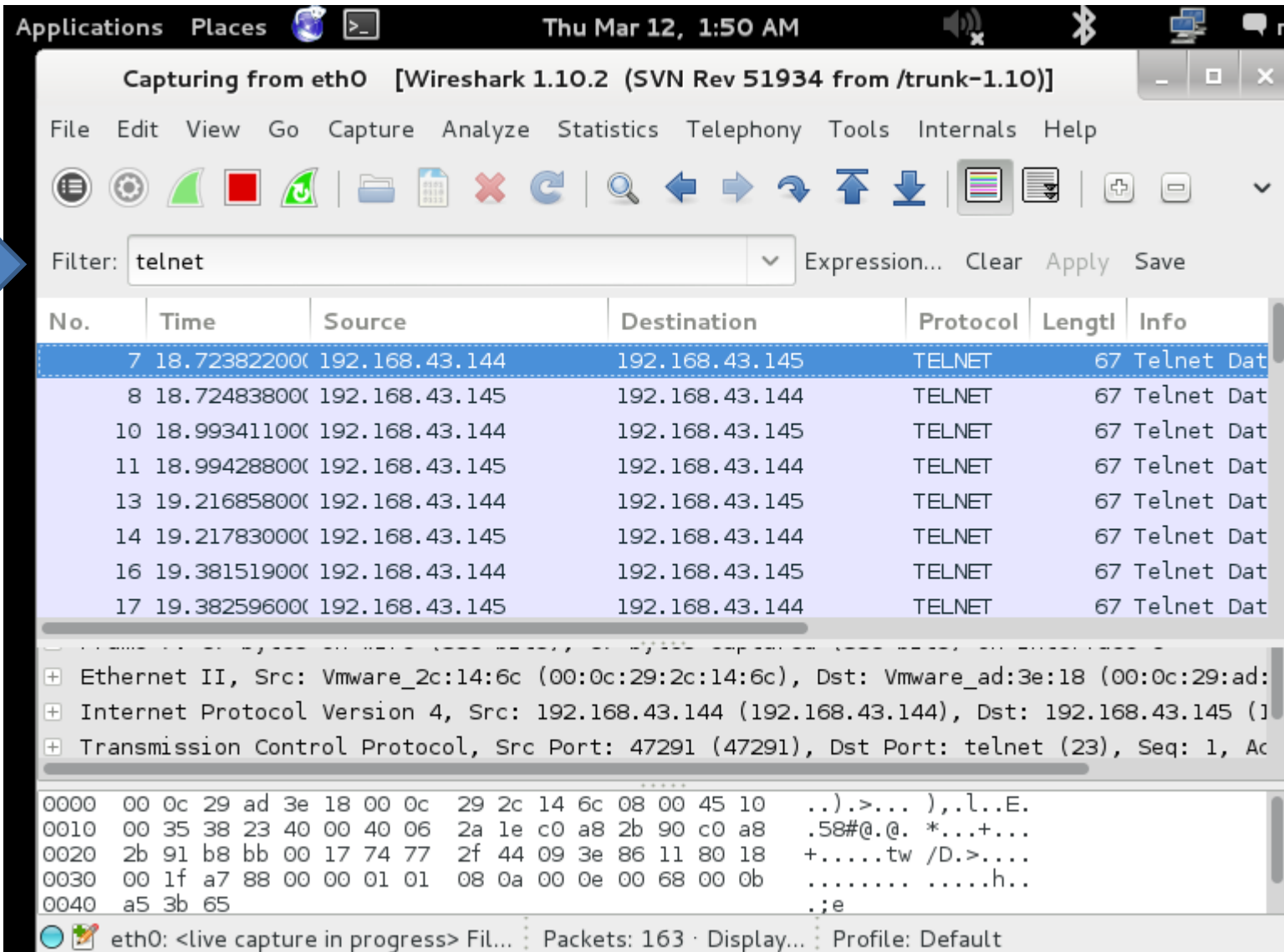
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To access official Ubuntu documentation, please visit:
http://help.ubuntu.com/
No mail.
msfadmin@metasploitable:~$ exit
Connection closed by foreign host.
root@kali:~# telnet 192.168.43.145
```

Wireshark desde Kali



Wireshark desde Kali, aplicar filtro



The screenshot shows the Wireshark 1.10.2 interface running on Kali Linux. The title bar indicates the system is on 'Thu Mar 12, 1:50 AM' and the user is 'root'. The main window is titled 'Capturing from eth0 [Wireshark 1.10.2 (SVN Rev 51934 from /trunk-1.10)]'. The menu bar includes File, Edit, View, Go, Capture, Analyze, Statistics, Telephony, Tools, Internals, and Help. The toolbar contains various icons for file operations, capture control, and analysis. A blue arrow points to the 'Filter' input field, which contains the text 'telnet'. To the right of the filter field are buttons for 'Expression...', 'Clear', 'Apply', and 'Save'. Below the filter field is a table of captured packets. The table has columns for No., Time, Source, Destination, Protocol, Length, and Info. The first packet (No. 7) is highlighted in blue and shows a TELNET connection from 192.168.43.144 to 192.168.43.145. Below the table, the packet details pane shows the selected packet's structure: Ethernet II, Internet Protocol Version 4, and Transmission Control Protocol. The packet bytes pane at the bottom shows the raw data in hexadecimal and ASCII.

Applications Places Thu Mar 12, 1:50 AM root

Capturing from eth0 [Wireshark 1.10.2 (SVN Rev 51934 from /trunk-1.10)]

File Edit View Go Capture Analyze Statistics Telephony Tools Internals Help

Filter: telnet Expression... Clear Apply Save

No.	Time	Source	Destination	Protocol	Length	Info
7	18.723822000	192.168.43.144	192.168.43.145	TELNET	67	Telnet Data
8	18.724838000	192.168.43.145	192.168.43.144	TELNET	67	Telnet Data
10	18.993411000	192.168.43.144	192.168.43.145	TELNET	67	Telnet Data
11	18.994288000	192.168.43.145	192.168.43.144	TELNET	67	Telnet Data
13	19.216858000	192.168.43.144	192.168.43.145	TELNET	67	Telnet Data
14	19.217830000	192.168.43.145	192.168.43.144	TELNET	67	Telnet Data
16	19.381519000	192.168.43.144	192.168.43.145	TELNET	67	Telnet Data
17	19.382596000	192.168.43.145	192.168.43.144	TELNET	67	Telnet Data

+ Ethernet II, Src: Vmware_2c:14:6c (00:0c:29:2c:14:6c), Dst: Vmware_ad:3e:18 (00:0c:29:ad:3e:18)

+ Internet Protocol Version 4, Src: 192.168.43.144 (192.168.43.144), Dst: 192.168.43.145 (192.168.43.145)

+ Transmission Control Protocol, Src Port: 47291 (47291), Dst Port: telnet (23), Seq: 1, Ack: 1000000000

0000 00 0c 29 ad 3e 18 00 0c 29 2c 14 6c 08 00 45 10 ..).>...),.l..E.

0010 00 35 38 23 40 00 40 06 2a 1e c0 a8 2b 90 c0 a8 .58#@.@. *...+...

0020 2b 91 b8 bb 00 17 74 77 2f 44 09 3e 86 11 80 18 +.....tw /D.>....

0030 00 1f a7 88 00 00 01 01 08 0a 00 0e 00 68 00 0bh..

0040 a5 3b 65e

eth0: <live capture in progress> Fil... Packets: 163 · Display... Profile: Default

Wireshark desde Kali

The screenshot shows the Wireshark network protocol analyzer running on a Kali Linux system. The top status bar indicates the date and time as 'Thu Mar 12, 1:51 AM' and the user as 'root'. The main window is titled 'Capturing from eth0 [Wireshark-1.10]'. The 'Filter' field is set to 'telnet'. The packet list pane shows a list of captured packets, with packet 7 selected. The packet details pane shows the selected packet's structure, including Ethernet II, Internet Protocol Version 4, and Transmission Control Protocol. The packet bytes pane shows the raw data of the selected packet.

Packet List:

No.	Time	Source
7	18.723822000	192.168.43.1
8	18.724838000	192.168.43.1
10	18.993411000	192.168.43.1
11	18.994288000	192.168.43.1
13	19.216858000	192.168.43.1
14	19.217830000	192.168.43.1
16	19.381519000	192.168.43.1
17	19.382596000	192.168.43.1

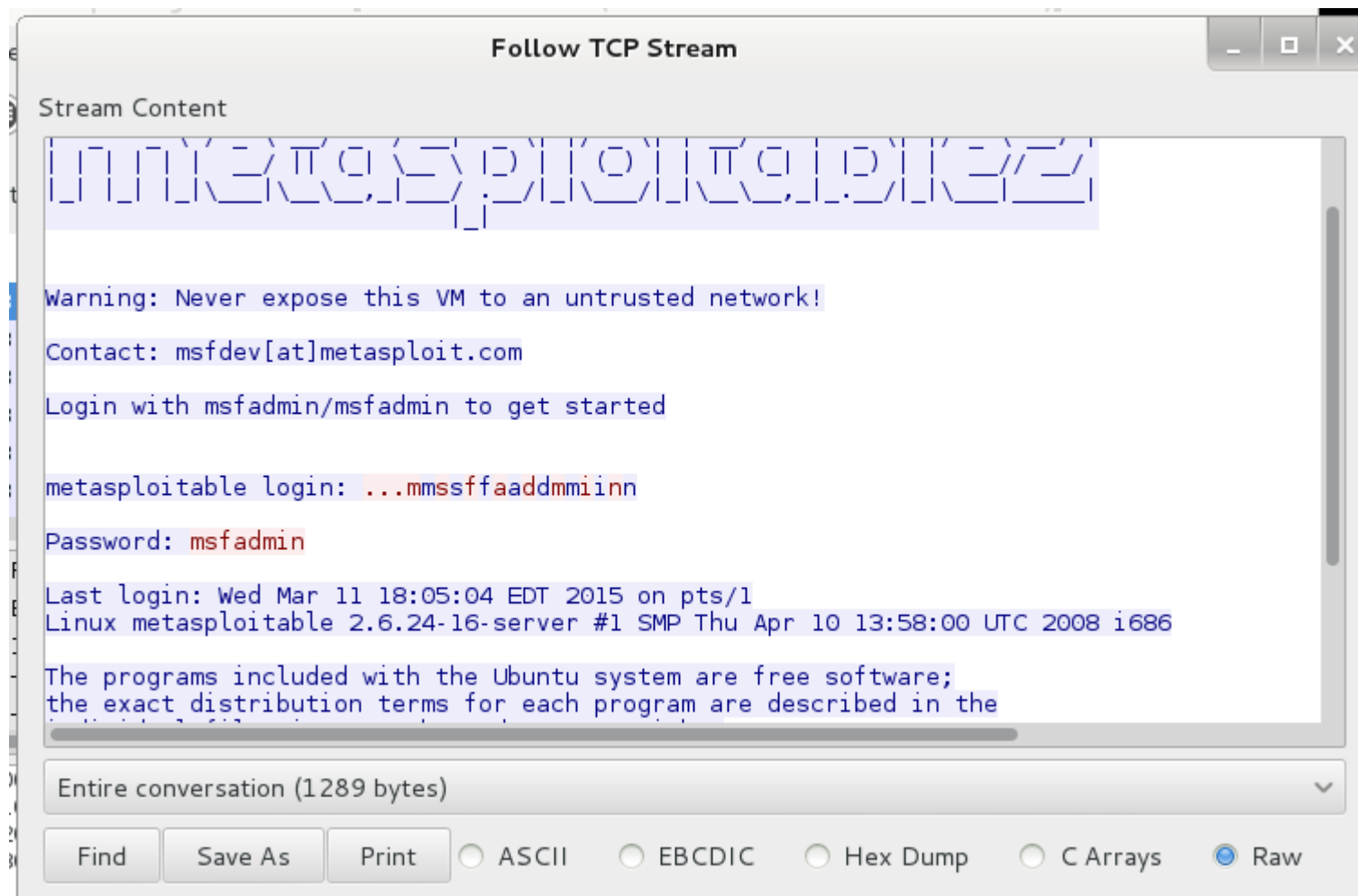
Packet Details:

- Ethernet II, Src: Vmware_2c:14:00:00:00:00, Dst: 192.168.43.145 (08:00:27:00:00:00)
- Internet Protocol Version 4, Src: 192.168.43.1, Dst: 192.168.43.145 (08:00:27:00:00:00)
- Transmission Control Protocol, Src Port: 23, Dst Port: 23, Seq: 1, Len: 67

Packet Bytes:

```
0000  00 0c 29 ad 3e 18 00 0c 29 00 00 00 00 00 00 00 00
0010  00 35 38 23 40 00 40 06 2a 00 00 00 00 00 00 00
0020  2b 91 b8 bb 00 17 74 77 2f 00 00 00 00 00 00 00
0030  00 1f a7 88 00 00 01 01 0e 00 00 00 00 00 00 00
0040  a5 3b 65
```


Wireshark desde Kali



telnet-cooked.pcap [Wireshark 1.8.2 (SVN Rev 44520 from /trunk-1.8)]

File Edit View Go Capture Analyze Statistics Telephony Tools Internals Help

Filter: tcp.stream eq 0 Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.0.2	192.168.0.1	TCP	74	3m-image-lm > telnet
2	0.002525	192.168.0.1	192.168.0.2	TCP	74	telnet > 3m-image-lm
3	0.002572	192.168.0.2	192.168.0.1	TCP	66	3m-image-lm > telnet
4	0.004160	192.168.0.2	192.168.0.1	TELNET	93	Telnet Data ...
5	0.150335	192.168.0.1	192.168.0.2	TELNET	69	Telnet Data ...
6	0.150402	192.168.0.2	192.168.0.1	TCP	66	3m-image-lm > telnet
7	0.150574	192.168.0.2	192.168.0.1	TELNET	69	Telnet Data ...
8	0.151946	192.168.0.1	192.168.0.2	TCP	66	telnet > 3m-image-lm
9	0.153657	192.168.0.1	192.168.0.2	TELNET	91	Telnet Data ...
10	0.153865	192.168.0.2	192.168.0.1	TELNET	130	Telnet Data ...
11	0.154984	192.168.0.1	192.168.0.2	TCP	66	telnet > 3m-image-lm
12	0.155577	192.168.0.1	192.168.0.2	TELNET	84	Telnet Data ...
13	0.155656	192.168.0.2	192.168.0.1	TELNET	75	Telnet Data ...
14	0.156646	192.168.0.1	192.168.0.2	TCP	66	telnet > 3m-image-lm
15	0.159016	192.168.0.1	192.168.0.2	TELNET	90	Telnet Data ...

Frame 1: 74 bytes on wire (592 bits), 74 bytes captured (592 bits)

Ethernet II, Src: Lite-On-C_3b:bf:fa (00:a0:cc:3b:bf:fa), Dst: WesternD_0f:

Internet Protocol Version 4, Src: 192.168.0.2 (192.168.0.2), Dst: 192.168.0.1

Transmission Control Protocol, Src Port: 3m-image-lm (1550), Dst Port: telnet (23)

0000 00 00 c0 9f a0 97 00 a0 cc 3b bf fa 08 00 45 10:.....E.
0010 00 3c 46 3c 40 00 40 06 73 1c c0 a8 00 02 c0 a8 .<F<@.@.s.....
0020 00 01 06 0e 00 17 99 c5 a0 ec 00 00 00 00 a0 02
0030 7d 78 e0 a3 00 00 02 04 05 b4 04 02 08 0a 00 9c }x.....
0040 27 24 00 00 00 00 01 03 03 00\$.....

File: "C:\Users\admin\Desktop\telnet-cooke... Packets: 92 Displayed... Profile: Default

Follow TCP Stream

Stream Content

```
.....!:"'..#..%..  
%.....!:"'..#..%..  
.....!:"'..#..%..  
$.....!:"'..#..%..  
m.zing.org:0.0.....xterm-color.....!..DISPLAY.ba  
openBSD/1386 (oof) (ttyp2)  
  
login: fake  
.....Password:user  
  
.....Last login: Sat Nov 27 20:11:4  
warning: no Kerberos tickets issued.  
openBSD 2.6-beta (OOF) #4: Tue Oct 1  
  
Welcome to OpenBSD: The proactively  
  
Please use the sendbug(1) utility to report bugs in the system.  
Before reporting a bug, please try to reproduce it with the latest  
version of the code. With bug reports, please try to ensure that  
enough information to reproduce the problem is enclosed, and if a  
known fix for it exists, include that as well.  
  
$ /sbin/ping www.yahoo.com  
PING www.yahoo.com (204.71.200.67): 56 data bytes  
64 bytes from 204.71.200.67: icmp_seq=0 ttl=241 time=69.885 ms  
64 bytes from 204.71.200.67: icmp_seq=1 ttl=241 time=73.591 ms  
64 bytes from 204.71.200.67: icmp_seq=2 ttl=241 time=72.302 ms  
64 bytes from 204.71.200.67: icmp_seq=3 ttl=241 time=73.493 ms  
64 bytes from 204.71.200.67: icmp_seq=4 ttl=241 time=75.068 ms  
64 bytes from 204.71.200.67: icmp_seq=5 ttl=241 time=70.239 ms  
.....  
--- www.yahoo.com ping statistics ---  
5 packets transmitted, 5 packets received, 0% packet loss  
  
Entire conversation (1634 bytes)
```

End Save As Print ASCII EBCDIC Hex Dump C Arrays Raw

Help Filter Out This Stream Close

Password revealed in TCP Stream

Macof para inundar un sw

```
Click to view your appointments and tasks
File Edit View Search Terminal Help
135605711(0) win 512
53:ed:ad:49:25:62 81:a2:fc:58:51:ee 0.0.0.0.28707 > 0.0.0.0.49879: S 945537655:
945537655(0) win 512
75:84:88:60:29:9d 3b:5:8d:3a:a1:2e 0.0.0.0.5023 > 0.0.0.0.26708: S 379561313:37
9561313(0) win 512
e4:d6:a8:6c:de:ad 55:2a:d5:1f:93:10 0.0.0.0.63334 > 0.0.0.0.24572: S 1838368509
:1838368509(0) win 512
32:20:fc:2a:91:6b 48:e7:c3:2d:ab:c6 0.0.0.0.43609 > 0.0.0.0.51718: S 1460934066
:1460934066(0) win 512
e7:8:3:3b:c4:d1 6e:48:e8:79:b3:83 0.0.0.0.60187 > 0.0.0.0.37893: S 1567634483:1
567634483(0) win 512
bb:21:d:6f:31:55 c8:ae:33:26:f3:5a 0.0.0.0.55085 > 0.0.0.0.56618: S 1495918327:
1495918327(0) win 512
83:24:8e:6b:4f:b e2:22:6d:54:1d:25 0.0.0.0.53003 > 0.0.0.0.31829: S 523205642:5
23205642(0) win 512
f8:b:89:15:23:df c7:57:d0:35:d7:63 0.0.0.0.36135 > 0.0.0.0.19955: S 999745131:9
99745131(0) win 512
dd:10:33:64:cb:32 5:b9:f6:3a:b:ca 0.0.0.0.43568 > 0.0.0.0.25836: S 2112239877:2
112239877(0) win 512
5f:ea:4a:6:fc:c6 35:5f:6c:16:f9:67 0.0.0.0.14635 > 0.0.0.0.15141: S 288436929:2
88436929(0) win 512
de:ce:19:28:73:65 38:27:51:c:8f:84 0.0.0.0.4749 > 0.0.0.0.22131: S 717142420:71
7142420(0) win 512
^Croot@kali:~# macof -i eth0
```




ICMP Ping

```
hping3 -1 10.0.0.25
```



ACK scan on port 80

```
hping3 -A 10.0.0.25 -p 80
```



UDP scan on port 80

```
hping3 -2 10.0.0.25 -p 80
```



Collecting Initial Sequence Number

```
hping3 192.168.1.103 -Q -p 139 -s
```



Firewalls and Time Stamps

```
hping3 -S 72.14.207.99 -p 80 --  
top-timestamp
```



SYN scan on port 50-60

```
hping3 -8 50-56 -S 10.0.0.25 -V
```



FIN, PUSH and URG scan on port 80

```
hping3 -F -p -U 10.0.0.25 -p 80
```



Scan entire subnet for live host

```
hping3 -1 10.0.1.x --rand-dest  
-I eth0
```



Intercept all traffic containing HTTP signature

```
hping3 -9 HTTP -I eth0
```



SYN flooding a victim

```
hping3 -S 192.168.1.1 -a  
192.168.1.254 -p 22 --flood
```