Ninja Scaning

by Fyodor

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http://insecure.org/presentations/CSW09/

Ncat

http://nmap.org/ncat/

Modern Networking Features

- SSL encryption support (client or server)
- Proxy (act as proxy server, or client chaining through multiple proxies)
- Portability
- TCP/UDP port redirection
- IPv6
- Fine-grained access control
- Connection brokering
- Missing feature

Ncat Chat

A slight hack to broker mode enables a very rudimentary chat server.

Official chat server for this presentation:

ncat insecure.org

(or telnet insecure.org 31337)

Server was started with command:

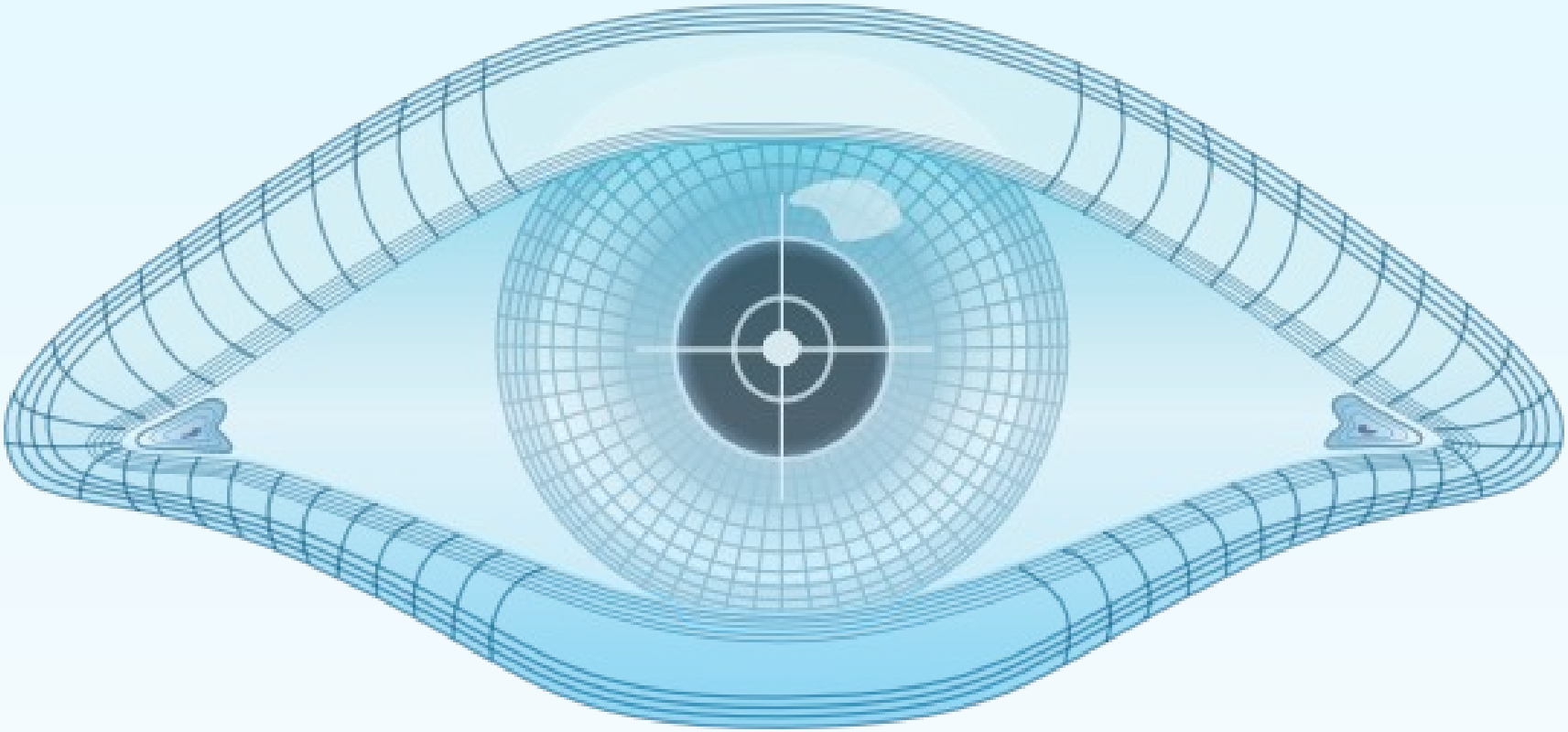
ncat -l --chat insecure.org

Final Ncat Notes

Available now in Nmap 4.85BETA4 at http://nmap.org/download.html

Practical usage examples are available in the users' guide: http://nmap.org/ncat/guide/

Nmap
http://nmap.org



CanSecWest Scans

Microsoft Scans

Nmap Scripting Engine
http://nmap.org/book/nse.html

```
# nmap -T4 -A scanme.nmap.org

Starting Nmap 4.85BETA4 ( http://nmap.org )
Interesting ports on scanme.nmap.org (64.13.134.52):
Not shown: 993 filtered ports
PORT      STATE  SERVICE VERSION
22/tcp    open   ssh     OpenSSH 4.3 (protocol 2.0)
|  ssh-hostkey: 1024
03:5f:d3:9d:95:74:8a:d0:8d:70:17:9a:bf:93:84:13 (DSA)
|_ 2048 fa:af:76:4c:b0:f4:4b:83:a4:6e:70:9f:a1:ec:51:0c
(RSA)
25/tcp    closed smtp
53/tcp    open   domain  ISC BIND 9.3.4
70/tcp    closed gopher
80/tcp    open   http    Apache httpd 2.2.2 ((Fedora))
|_ html-title: Go ahead and ScanMe!
113/tcp   closed auth
31337/tcp closed Elite
Device type: general purpose
OS details: Linux 2.6.20-1 (Fedora Core 5)
```

NSE Scripts

Nmap 4.85BETA4 has 55 of them

Examples: sql-injection, asn-query, dns-zone-transfer, http-open-proxy, irc-info, pop3-brute, snmp-brute

All scripts & libraries documented at: http://nmap.org/nsedoc/

SMB/MSRPC Scripts

Ron Bowes spent months researching SMB/MSRPC protocols and wrote 12 scripts.

Informational: smb-os-discovery, smb-server-stats, smb-system-info, smb-security-mode

Detailed Enumeration: smb-enum-users, smb-enum-domains, smb-enum-processes, smb-enum-sessions, smb-enum-shares

More intrusive: smb-brute, smb-check-vulns, smb-pwdump

Who to test them out on?

Microsoft

Facebook Scans

BunnyLOL.Facebook.Com

```
# nmap -T4 -O -sCV bunnylol.facebook.com
Starting Nmap 4.85BETA4 ( http://nmap.org )
Interesting ports on bunnylol.facebook.com
(69.63.176.80):
Not shown: 999 filtered ports
PORT   STATE SERVICE VERSION
80/tcp open  http    CherryPy httpd 3.1.1
|  html-title: Site doesn't have a title
(text/html).
|_ Did not follow redirect to
http://www.dev.facebook.com/intern/authorize_lolb
unny.php?next=http%3A%2F%2Fbunnylol.facebook.com
%2F
Device type: load balancer
Running (JUST GUESSING) : F5 Networks embedded
(86%)
Aggressive OS guess: F5 BIG-IP load balancer
(86%)
IP ID Sequence Generation: Randomized
Nmap done: 1 IP address ... scanned in 15.21s
```

Facebook's Moochspot.Com


```
# nmap -T4 -v -sCV moochspot.com
Starting Nmap 4.85BETA4 ( http://nmap.org )
Interesting ports on www.moochspot.com
(69.63.178.60):
Not shown: 999 filtered ports
PORT   STATE SERVICE VERSION
80/tcp open  http    Jetty httpd 5.1.4
(Linux/2.6.12-1.1398_FC4smp amd64
java/1.6.0_07)
|  robots.txt: has 1 disallowed entry
|_ /admin/
|_ html-title: MoochSpot - Home

Nmap done: 1 IP address (1 host up) scanned
in 10.32s
```

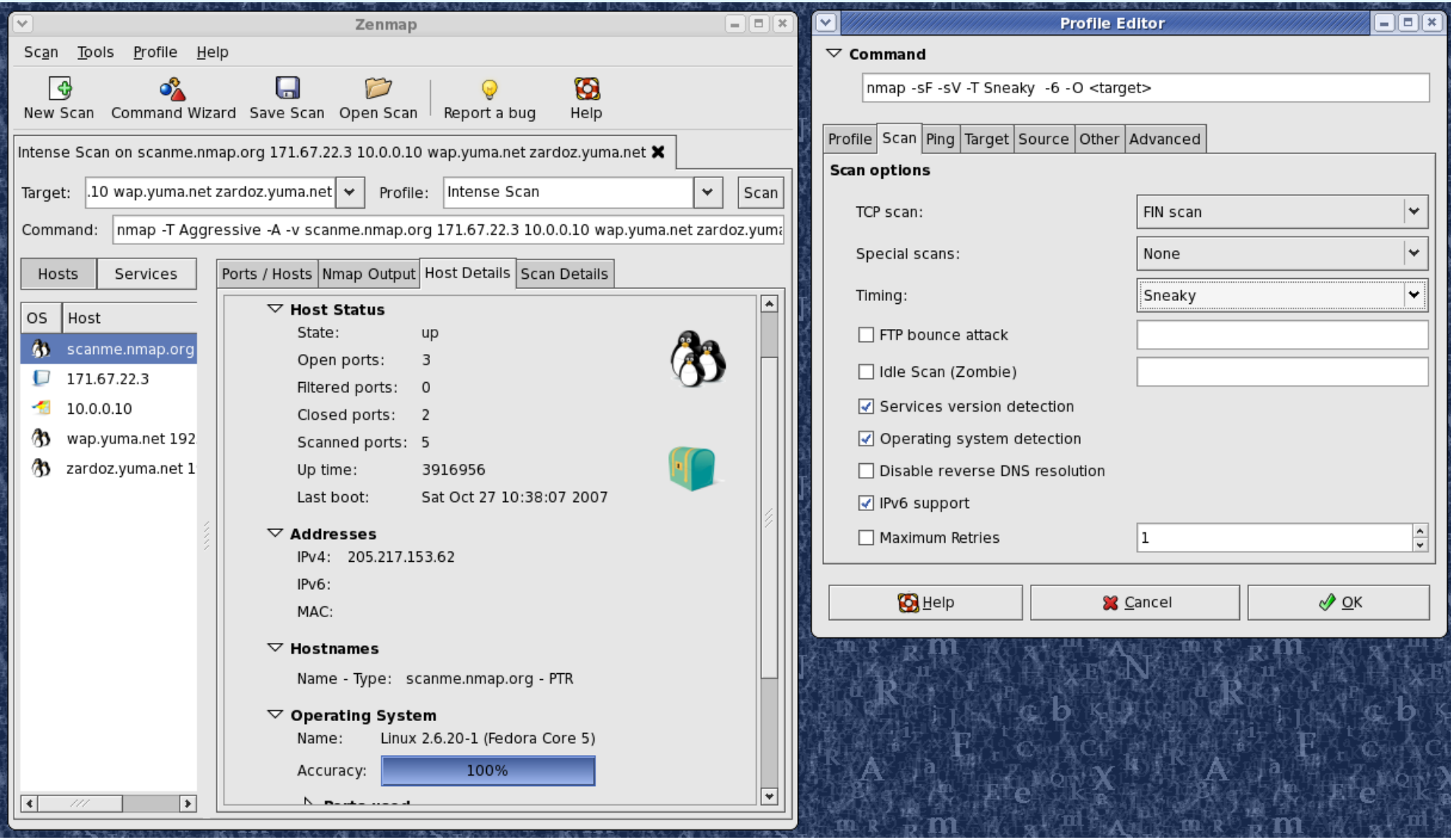
Ndiff

```
# ndiff facebook-031709.xml facebook-031809.xml
[...]
arborvip.tfbnw.net (69.63.179.23):
        Host is up, was unknown.
        Add ipv4 address 69.63.179.23.
        Add hostname arborvip.tfbnw.net.
        100 tcp ports are filtered.
vpnhub01-lo2.tfbnw.net (204.15.21.243):
        Remove hostname vpnhub01-lo2.tfbnw.net.
metroid.tfbnw.net (204.15.21.206):
        Remove hostname metroid.tfbnw.net.
69.63.184.144:
        Host is up, was unknown.
        Add ipv4 address 69.63.184.144.
        +80/tcp open http
        +443/tcp open http Apache httpd
1.3.41.fb1
        98 tcp ports are filtered.
```

Simple Ndiff Cron Script

```
#!/bin/sh
date=`date "+%s"`
cd /hack/facebook/scripts/
nmap -T4 -F -sV -O --osscan-limit --osscan-
guess -oA facebook-${date} [netblocks]  >
/dev/null
ndiff facebook-old.xml facebook-${date}.xml >
facebook-diff-${date}
cp facebook-${date}.xml facebook-old.xml
echo "\n********** NDIFF RESULTS **********\n"
cat facebook-vscan-diff-${date}
echo "\n********** SCAN RESULTS **********\n"
cat facebook-vscan-${date}.nmap
```

Zenmap GUI


Zenmap
Scan Tools Profile Help
New Scan
Command Wizard
Save Scan
Open Scan
Report a bug
Help
Intense Scan on scanme.nmap.org 171.67.22.3 10.0.0.10 wap.yuma.net zardoz.yuma.net
Target: .10 wap.yuma.net zardoz.yuma.net
Profile: Intense Scan
Scan
Command: nmap -T Aggressive -A -v scanme.nmap.org 171.67.22.3 10.0.0.10 wap.yuma.net zardoz.yuma
Hosts
Services
OS
Host
scanme.nmap.org
171.67.22.3
10.0.0.10
wap.yuma.net 192
zardoz.yuma.net 1
Ports / Hosts
Nmap Output
Host Details
Scan Details
Host Status
State: up
Open ports: 3
Filtered ports: 0
Closed ports: 2
Scanned ports: 5
Up time: 3916956
Last boot: Sat Oct 27 10:38:07 2007
Addresses
IPv4: 205.217.153.62
IPv6:
MAC:
Hostnames
Name - Type: scanme.nmap.org - PTR
Operating System
Name: Linux 2.6.20-1 (Fedora Core 5)
Accuracy: 100%
Profile Editor
Command
nmap -sF -sV -T Sneaky -6 -O <target>
Profile
Scan
Ping
Target
Source
Other
Advanced
Scan options
TCP scan: FIN scan
Special scans: None
Timing: Sneaky
FTP bounce attack
Idle Scan (Zombie)
Services version detection
Operating system detection
Disable reverse DNS resolution
IPv6 support
Maximum Retries
1
Help
Cancel
OK

Top Contributors Since CSW '08

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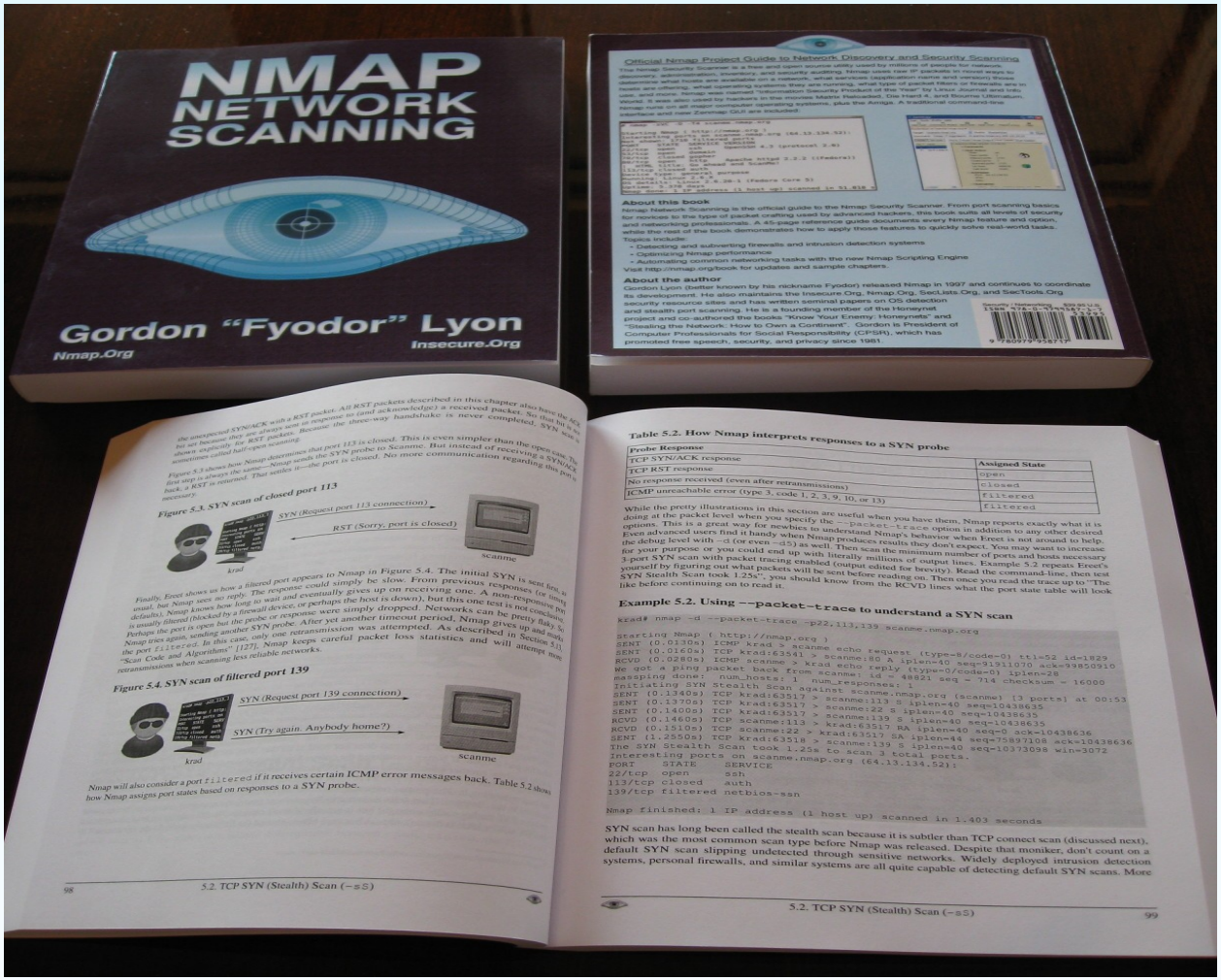

Questions and Resources

Download Nmap from http://nmap.org

Slides are posted at: http://insecure.org/presentations/CSW09/