

Hot Tools 2004

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WARNING!

Make sure you have appropriate authorization to run these tools on your network.



These Tools Allow You To:

- 1. Sniff network passwords and unencrypted data
- 2. Open suspect files
- 3. Locate rogue servers on the network
- 4. Test blocked ports
- 5. Test for SMTP relaying
- 6. Perform reconnaissance on an attacker
- 7. Test for UDP and TCP flood vulnerabilities
- 8. Find evidence on a hard drive
- 9. Set up a decoy system
- 10. Log active connections/endpoints
- 11. Keylog a suspect system
- 12. Sniff wireless network communications
- 13. Hide information in graphics, audio files, etc.



These Tools Allow You To:

- 14. Test password integrity
- 15. Perform a brute force password crack
- 16. Audit a suspect system in stealth mode
- 17. Locate auditing software on the network
- 18. Intercept traffic and alter data
- 19. Locate M-i-M devices
- 20. Locate open shares on network drives
- 21. Identify unpatched systems
- 22. Traceback suspicious email
- 23. View HTTP graphic transfers
- 24. Locate rogue wireless access points
- 25. Surf the Internet anonymously
- 26. Hide surfing activity



The White Hat/Black Hat Toolkit

- Ethereal ❖
- □ Hex Workshop ❖
- NetScanTools Pro ❖
- Nmap Network Scanner ❖
- Packet Builder
- □ Hurricane Search ❖
- □ Specter Honeypot ❖
- TCPView ❖
- Cain and Abel
- White Glove/Deception Toolkit
- Snort and IDS Center
- Dsniff

- Keyghost Keylogger
- Brutus Password Cracker
- Aida32 Auditor ❖
- Camera Shy
- Invisible Secrets ❖
- Ettercap Intercepter ❖
- LANguard Network Scanner ❖
- VisualRoute ❖
- HTTP Sniffer ❖
- NetStumbler/MiniStumbler
- Stealth Surfer
- Various antennas and GPS

❖ LLK v5.0



DEMO TIME!



Ethereal

Price: Free; distributed under the GNU

license

Link: <u>www.ethereal.com</u>

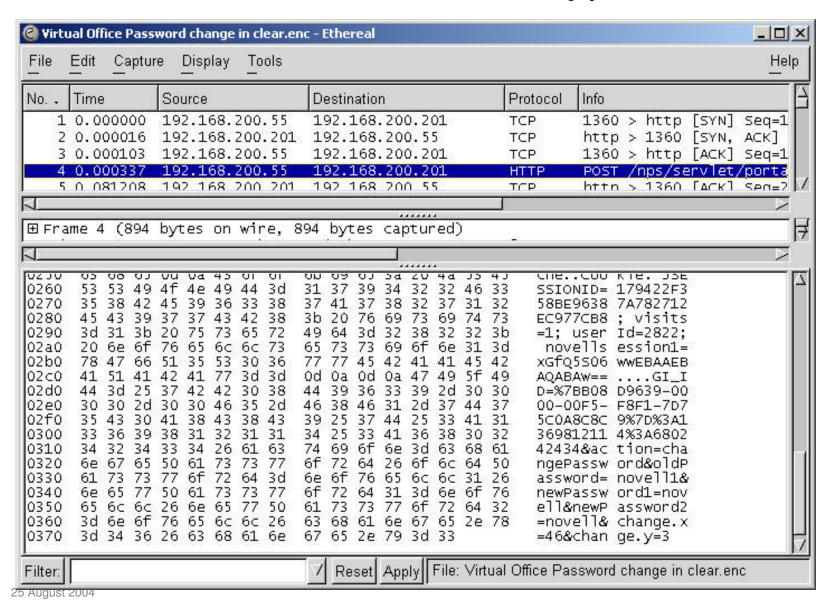
General: Protocol analyzer; requires winpcap

to run over W32 platform (available at

winpcap.polito.it.



Sniff Passwords and Unencrypted Data



8



Hex Workshop

Price: US \$49.95

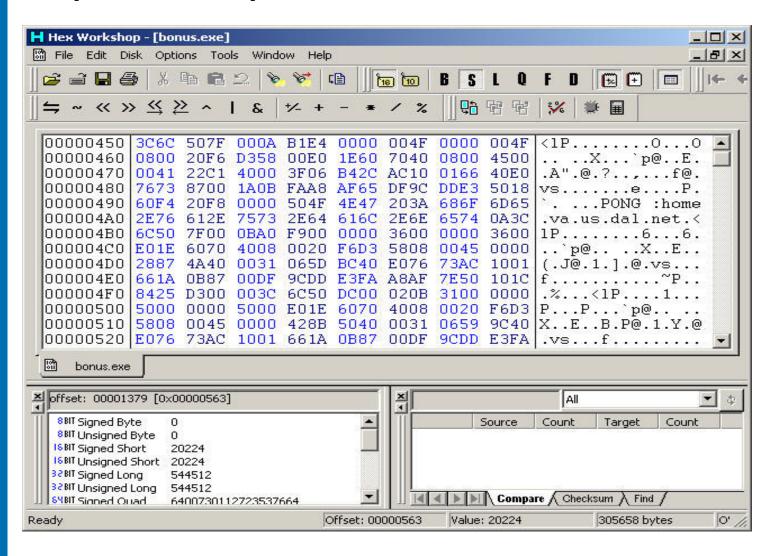
Link: <u>www.bpsoft.com</u>

General: General hex editor; includes Base

Converter applet.



Open Suspect Files





NetScanTools Pro

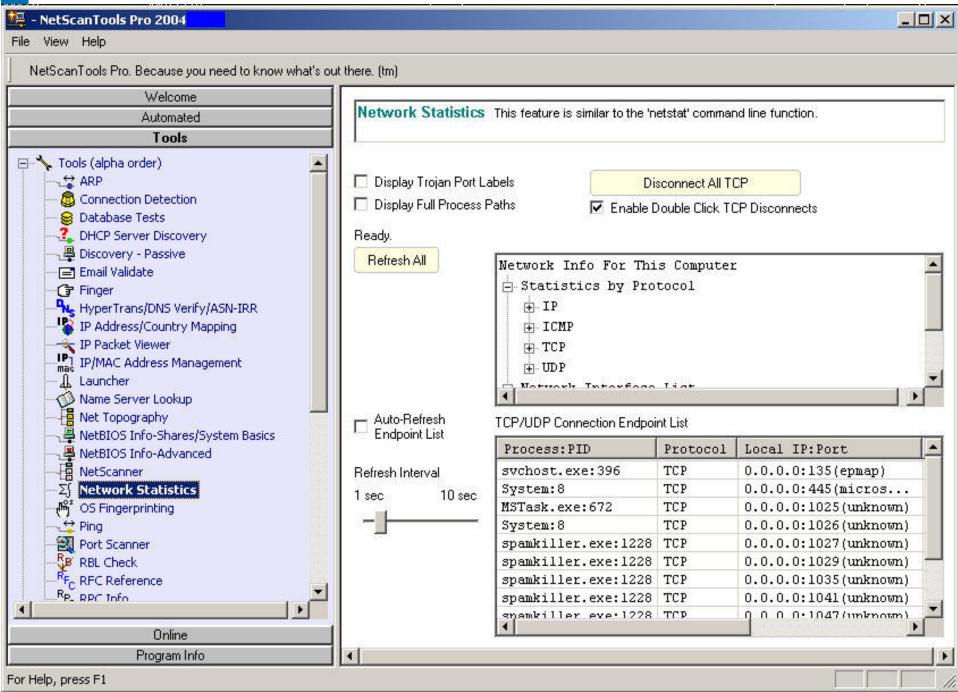
Price: US \$199.00

Link: <u>www.netscantools.com</u>

General: Multifunction tool that includes

Wizard tool to help trace back and

identify a device.



25 August 2004



Nmap

Price: Free

Link: <u>www.insecure.org</u>

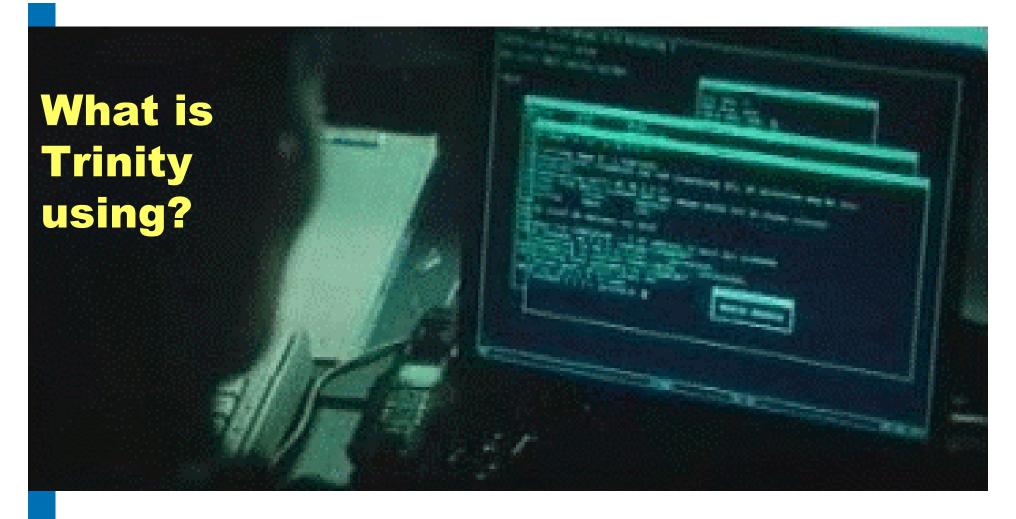
General: Well-recognized network mapping

tool includes timing mechanism,

Xmas mapping and idle mapping



The Matrix Reloaded





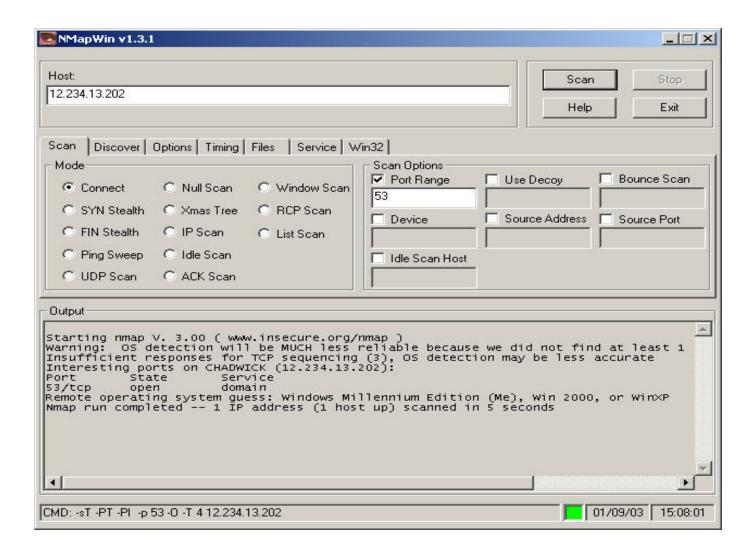
The Matrix Reloaded: Nmap!

```
run completed -- 1 IP address (1 host up) scanneds
houke 10,2,2,2 -rootpu="Z10N0101"
         to 10.2.2.2:55h ... successful.
                                                       enter passauro
```

25 August 2004



Perform Reconnaissance on an Attacker





Packet Builder

Price: Free

Link: <u>www.engagesecurity.com</u>

General: Built by Gregory Wilmes; runs on

winpcap; download .rsb scripts

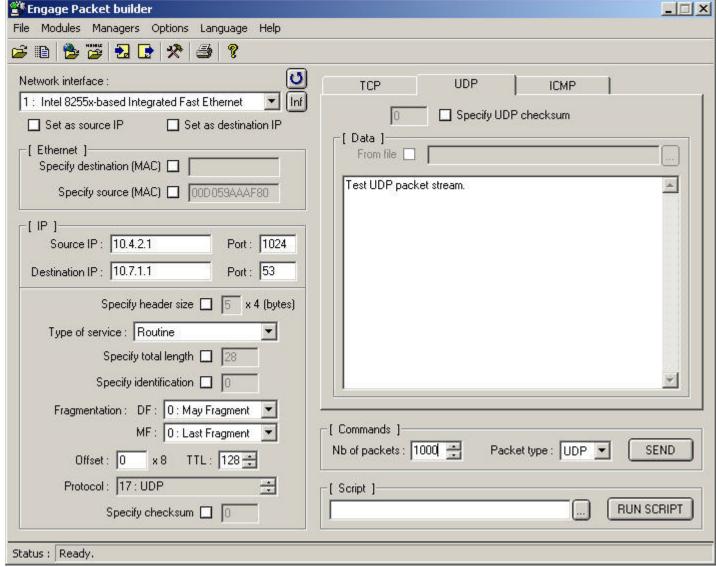
(Packet Builder was formerly called

"Rafale")

25 August 2004



Test Flood Vulnerabilities





Hurricane Search

Price: US \$149

Link: <u>www.hurricanesoft.com</u>

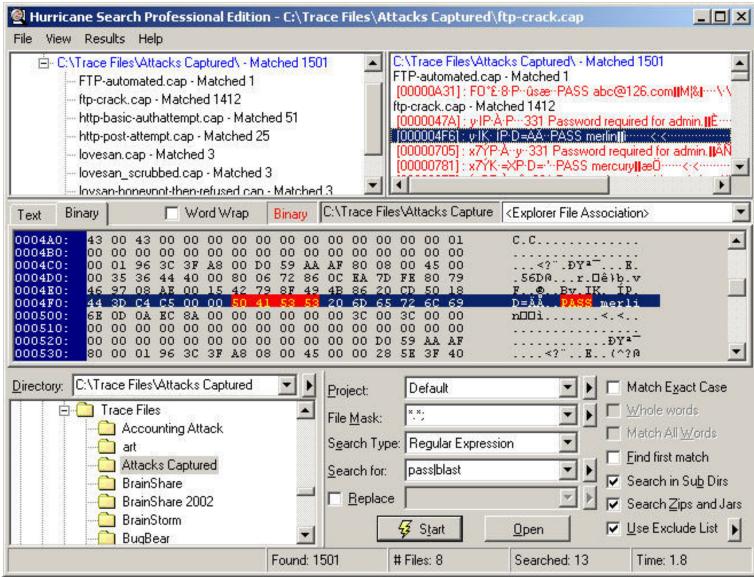
General: Grep-like tool; can search through

zipped files; use "|" to search for

multiple terms.



Find Evidence on a Hard Drive



25 August 2004 20



Specter Honeypot

Price: \$400-\$899 depending on OS spoofing

abilities

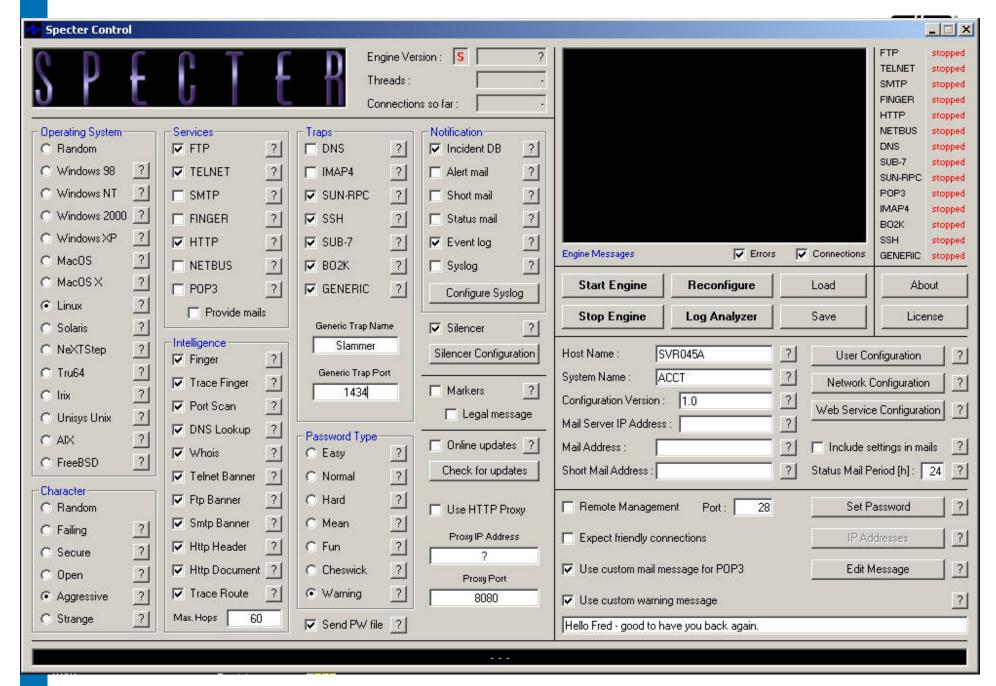
Link: <u>www.specter.com</u>

General: Slick interface; spoofs numerous OS

types; silencer option addresses DoS

possibility; use markers to correlate

hard drive with an attack.





TCPView

Price: Free

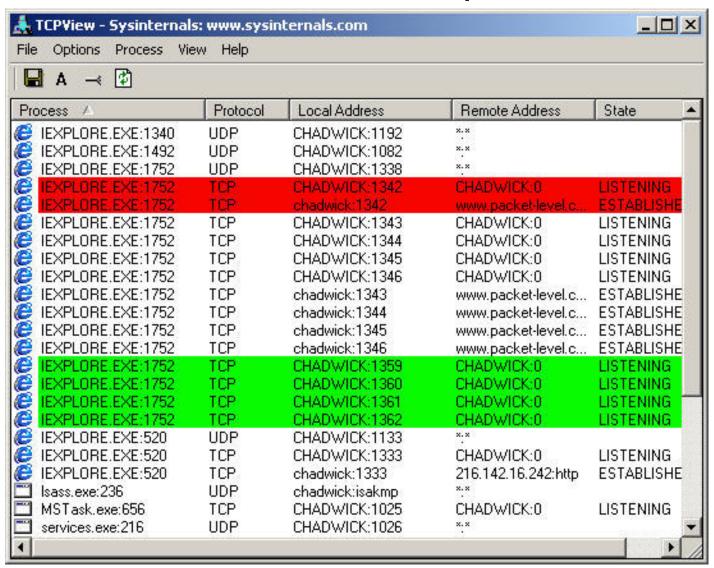
Link: <u>www.sysinternals.com</u>

General: TCP connection and UDP endpoint

tracking; tear down connections.



Log Active Connections/Endpoints





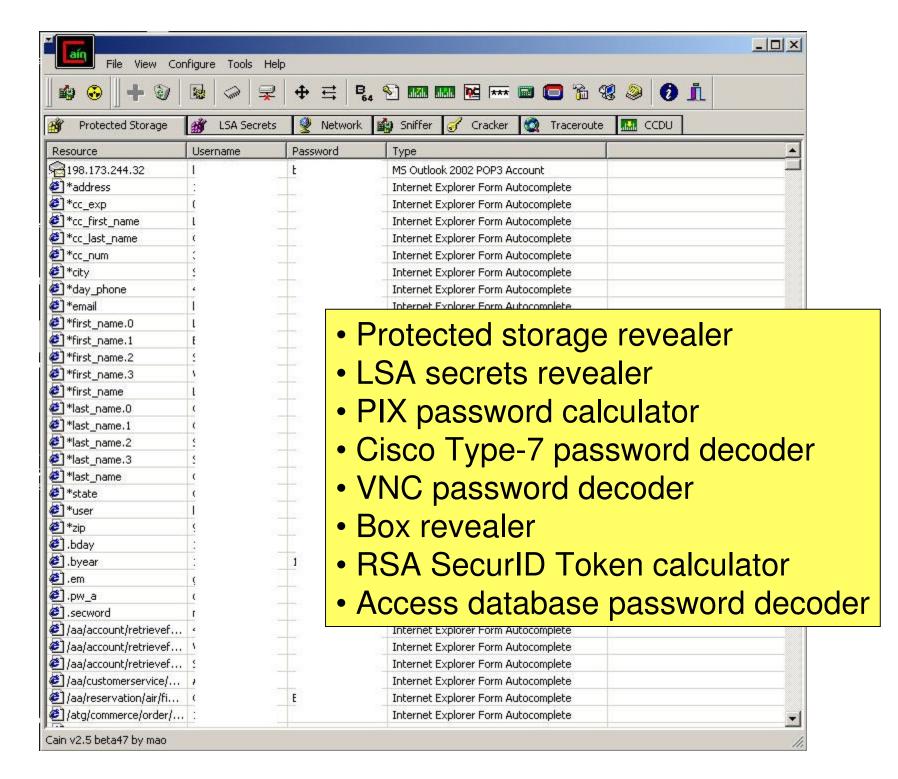
Cain and Abel

Price: Password cracker; local forensic tool

Link: <u>www.oxid.it</u>

General: All-in-all a very dangerous tool in the

wrong hands.







White Glove/Deception Toolkit

Price: White Glove \$100

Deception Toolkit - Free

Link: <u>www.all.net</u>

General: Honeypot; interface included if run

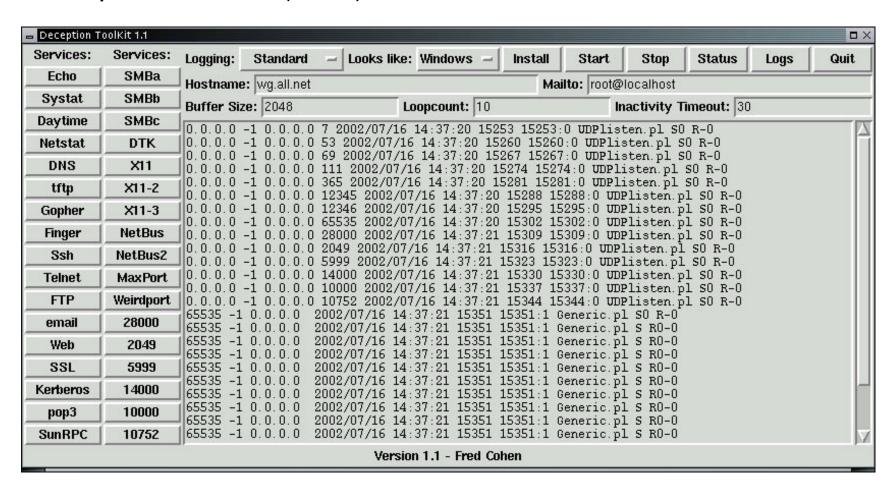
over White Glove (bootable Linux).



White Glove \$/Deception Toolkit

www.all.net

Deception Toolkit (DTK) on White Glove





Snort and IDS Center (Windows)

Price: Free; distributed under the GNU

license

Link: <u>www.snort.org</u> and

www.engagesecurity.com

General: IDS and front end. Well-resepected;

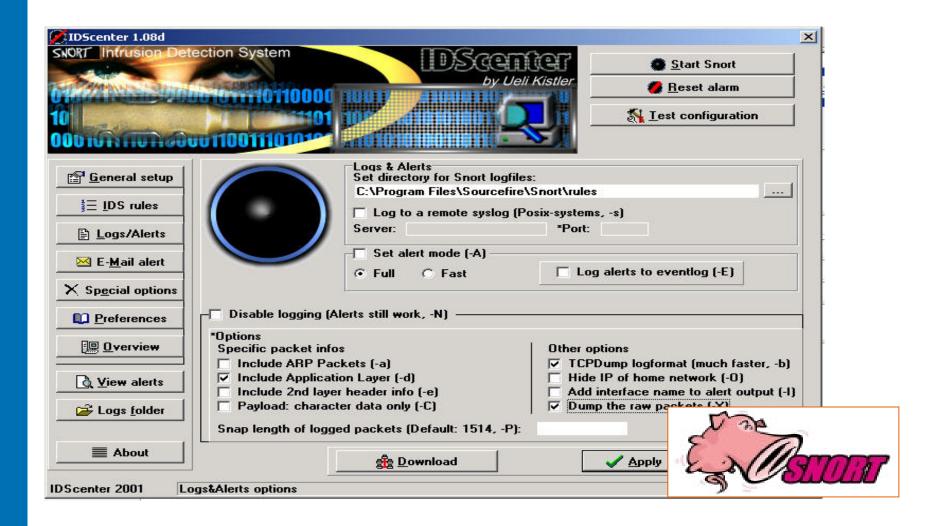
numerous contributors; newly

documented.



www.snort.org

Snort + IDSCenter





Keyghost Keylogger

Price: US \$89 (home edition)

Link: <u>www.keyghost.com</u>

General: Hardware keylogging device; formats

include plug style and full keyboard

style.



Keylog a Suspect System



```
_ | | | X
Untitled - Notepad
File Edit Format Help
Keyghosts
[C] safe mode
KeyGhost II Standard v8.0.0
www.keyghost.com
Menu >
    Entire log download
    Section log download
    Wipe log
    Format memory
    Options
    Optimize speed
    Password change
    Diagnostics
    exit
Select > 1

    key to stop -

keys so far is 1088 out of 524000 ...
Test
<alt-'F4><alt-'F4><alt-'F4><alt-'F4<ON><PWR><'F7>
<bks><KS><bks>krueg<ON>lMic
hael...
It reallydepends onthe amount that you buy - you can get a
good deal if you pu
rchse in<bks><bks><bks><bks><bks>(zbks>(1x))ase in quantiti
```



Brutus

Price: Free

Link: <u>www.hoobie.net</u>

General: Specialized and brute force password

cracking tool; contains 800 word

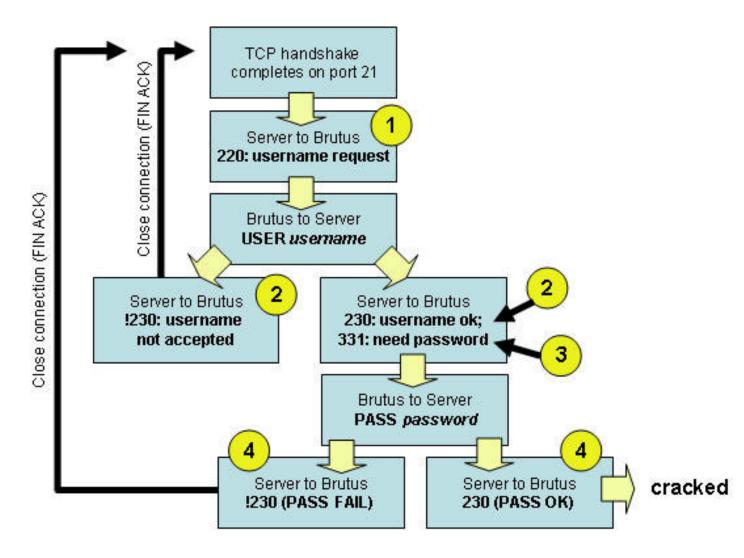
password list; username and

password process can be

customized.

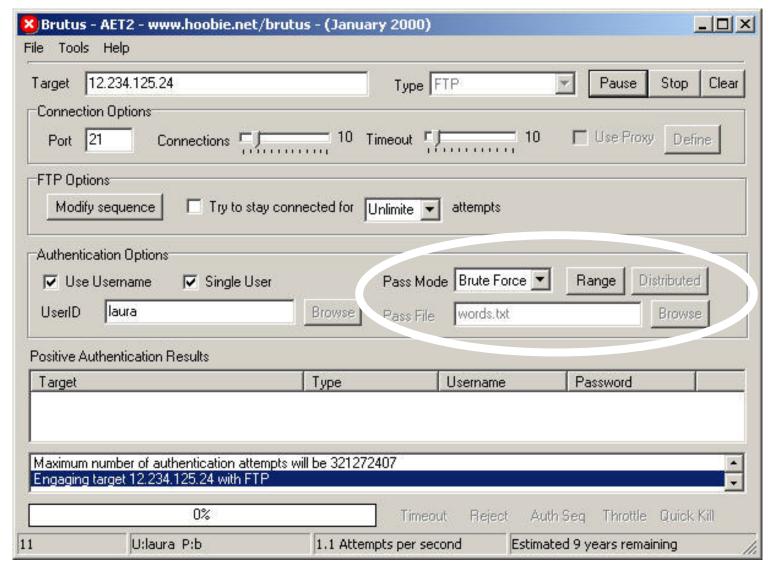


Password Cracking Technique





Perform a Brute Force Password Crack





Aida32

Price: Free

Link: www.aida32.hu

General: System auditing tool; excellent reporting

abilities; can be set in stealth mode for

remote auditing (not completely

undetectable).

Note: On March 23, 2004, Tamas Miklos

announced discontinuation of further

development/updates/licensing of Aida32.

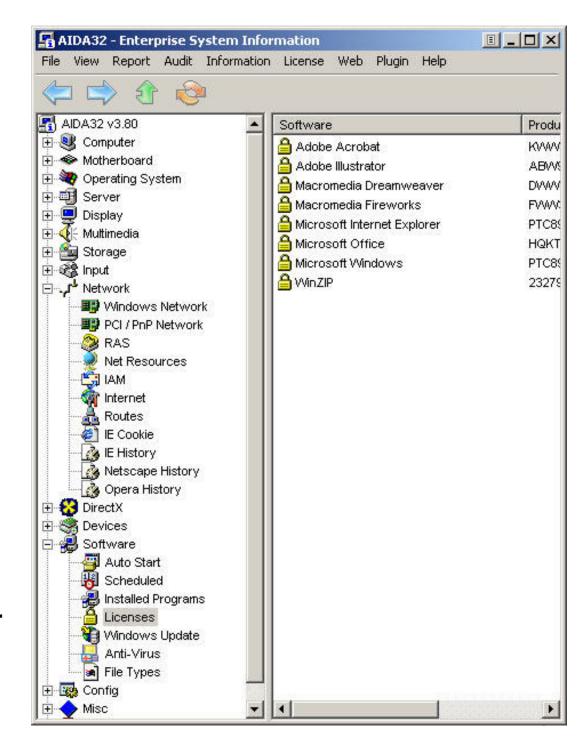
It still works great, however.

25 August 2004

Audit a Suspect System in Stealth Mode

C:\aida32 /hiddenserver /silent

I recommend you set Aida up to audit on a schedule and upload the results instead of leaving the server process running all the time (security issue). See www.aida32.hu for details.





Camera Shy

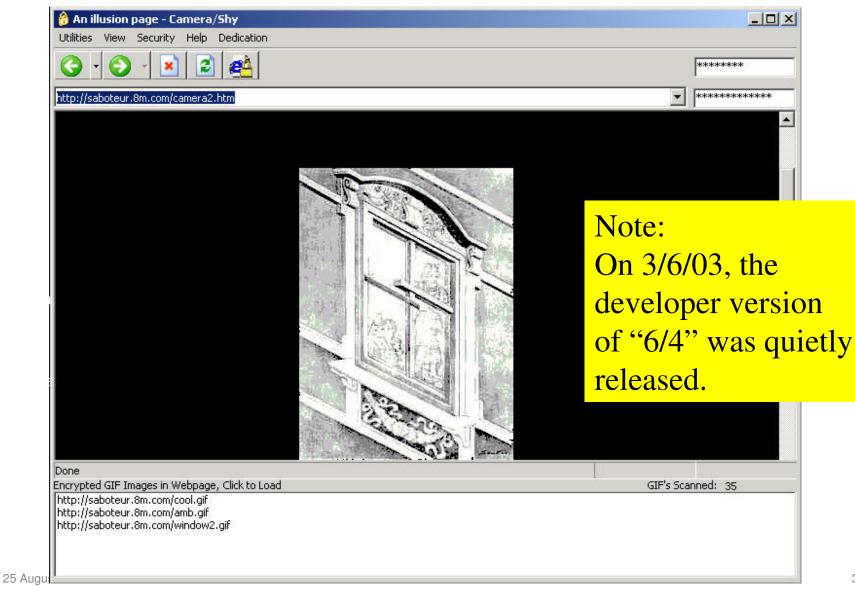
Price: Free.

Link: <u>hactivismo.com</u>

General: Steganography site browser.



Camera Shy



39



Invisible Secrets

Price: \$49

Link: <u>www.neobytesolutions.com</u>

General: Steganography tool – includes ability

to shred files and remote Internet

footprints.



Invisible Secrets

LSB Steganography Data injection or data replacement



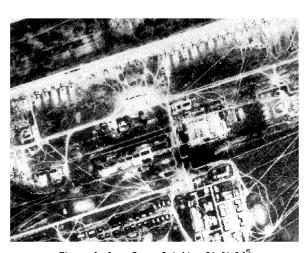


Figure 4: Long-Range Aviation Airfield 5



Carrier + Secret

= Stego Image



Ettercap

Price: Free

Link: <u>www.sourceforge.net</u>

General: Traffic intercepter using Man-in-the-

Middle attack method; catches

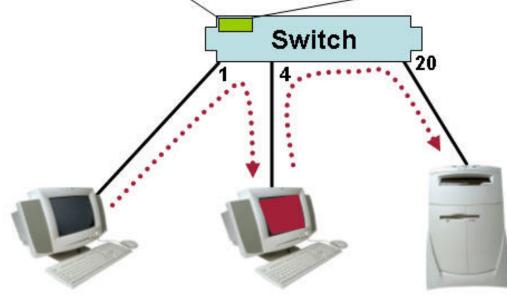
passwords; can inject data into traffic;

can alter date in traffic path.

M-i-M Poisoning (Sniff Off an Unmanageable Switch)







Fred MAC: 00:02:B3:21:F9:02 IP: 10.1.0.99

ARP table 10.1.0.1 is at 00:D0:59:AA:AF:80

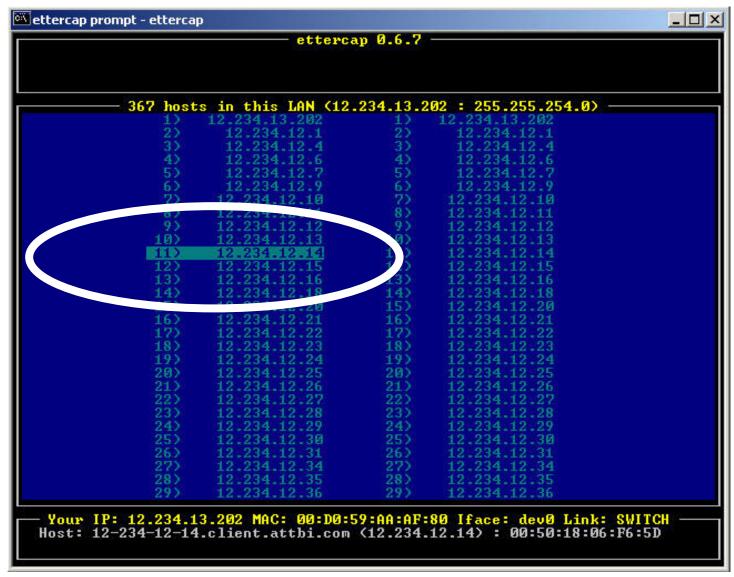
Ettercap system MAC: 00:D0:59:AA:AF:80 IP: 10.1.0.66

FTP server MAC: 00:20:78:E0:E4:4F IP: 10.1.0.1

ARP table 10.1.0.99 is at 00:D0:59:AA:AF:80

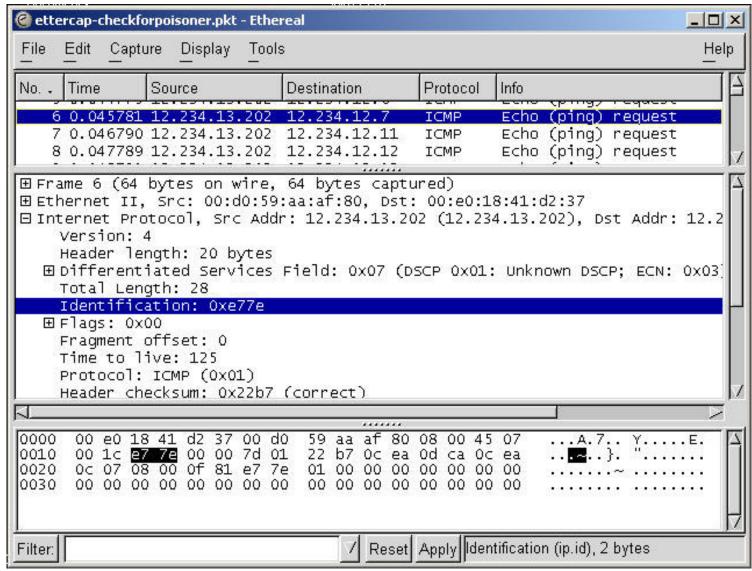








Locate M-i-M Ettercap Devices





LANguard Network Scanner

Price: US \$295 and up

Link: <u>www.gfi.com</u>

General: Vulnerability scanner; OS

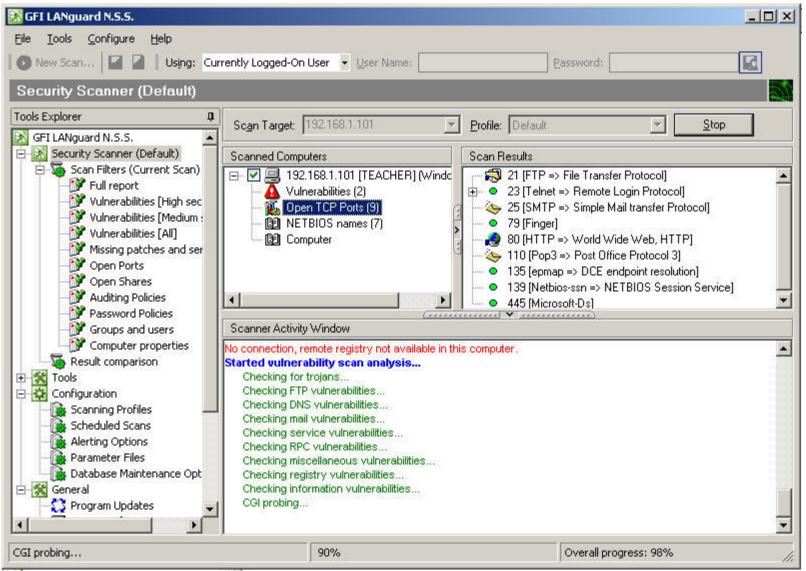
fingerprinting; port scanning; locate

open shares; locate cgi script

vulnerabilities; patch/hotfix detection.

Locate Open Ports, Shares and Unpatched Systems on the Network







VisualRoute

Price: US \$49.95 and up

Link: <u>www.visualware.com</u>

General: Visual representation of traceroute

operation; includes whois

functionality.

Trace Back Suspicious Email

Microsoft

All Products | Support | Search | Microsoft.com Guide

Microsoft Home



Microsoft Customer

this is the latest version of security update, the "September 2003, Cumulative Patch" update which eliminates all known security vulnerabilities affecting MS Internet Explorer, MS Outlook and MS Outlook Express. Install now to protect your computer from these vulnerabilities, the most serious of which could allow an malicious user to run executable on your system. This update includes the functionality of all previously released patches.

System requirements	Windows 95/98/Me/2000/NT/XP
🕜 This update applies to	MS Internet Explorer, version 4.01 and later MS Outlook, version 8.00 and later MS Outlook Express, version 4.01 and later
	Customers should install the patch at the earliest opportunity.
	Run attached file. Choose Yes on displayed dialog box.
② How to use	You don't need to do anything after installing this item.

Microsoft Product Support Services and Knowledge Base articles can be found on the <u>Microsoft Technical Support</u> web site. For security-related information about Microsoft products, please visit the <u>Microsoft Security Advisor</u> web site, or <u>Contact Us.</u>

Thank you for using Microsoft products.

Please do not reply to this message. It was sent from an unmonitored e-mail address and we are unable to respond to any replies.

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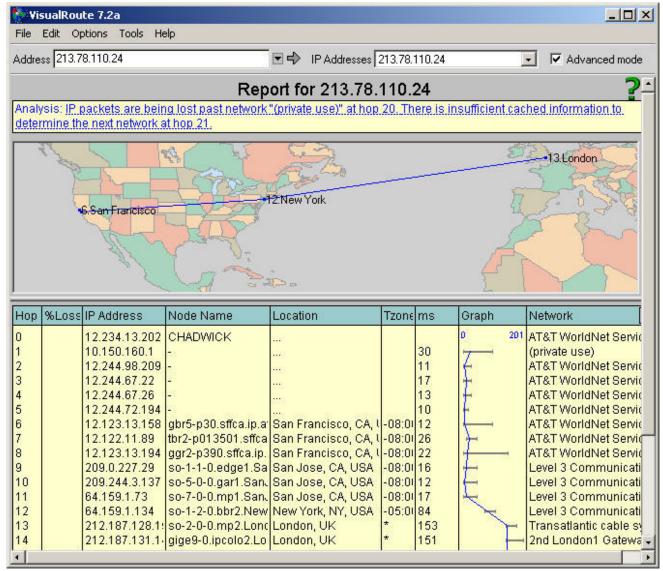
Examining the Email Header

Last "Received" is closest to sender.

```
Received: from msgdirector2.onetel.net.uk (212.67.96.149)
        by mail11a.verio-web.com (RS ver 1.0.86vs) with SMTP id 1-0875884261
        for <lchappell@packet-level.com>; Fri, 19 Sep 2003 02:51:01 -0400 (EDT)
Received: from cpcagpya (213-78-110-24.friaco.onetel.net.uk [213.78.110.24])
        by msgdirector2.onetel.net.uk (Mirapoint Messaging Server MOS 3.3.6-GR)
        with SMTP id AJC60345;
        Fri, 19 Sep 2003 07:43:43 +0100 (BST)
Date: Fri, 19 Sep 2003 07:43:42 +0100 (BST)
Message-Id: <200309190643.AJC60345@msgdirector2.onetel.net.uk>
FROM: "Security Department" < vkrmgchc_selqh@cqqi.microsoft.com>
TO: "Commercial Customer" <customer@cqqi.microsoft.com>
SUBJECT: Net Security Upgrade
Mime-Version: 1.0
Content-Type: multipart/mixed; boundary="qqcfwvbvhdtrdf"
X-Loop-Detect:1
Status:
```

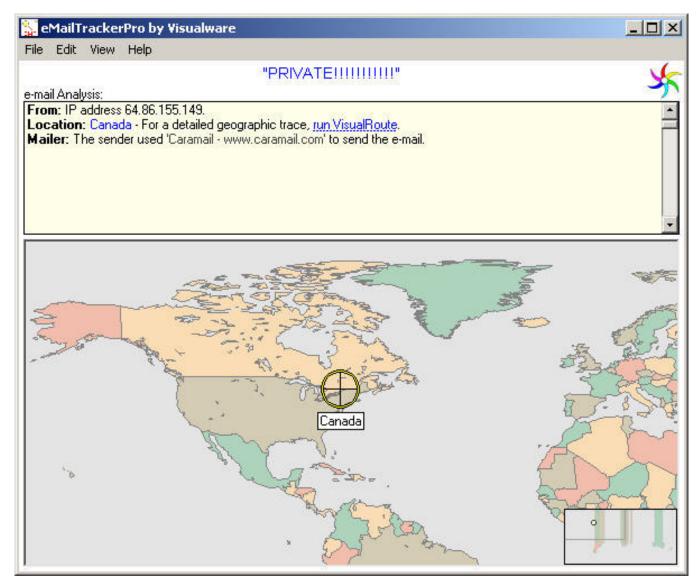


Visual Trace Back





eMailTracker Pro





HTTP Sniffer

Price: US \$29.95

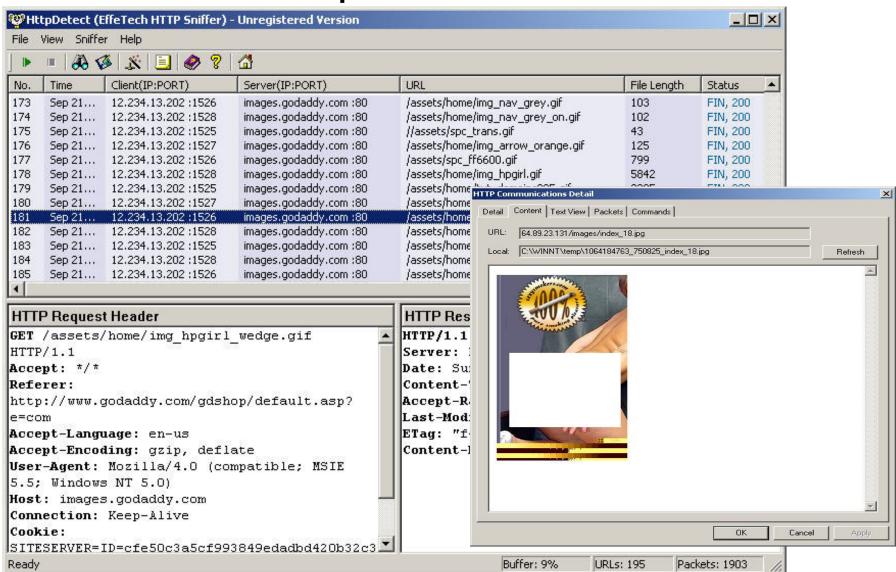
Link: <u>www.effetech.com</u>

General: HTTP traffic sniffer; graphic

reassembler



View HTTP Graphic Transfers





NetStumbler/MiniStumbler

Price: Free

Link: <u>www.netstumbler.com</u>

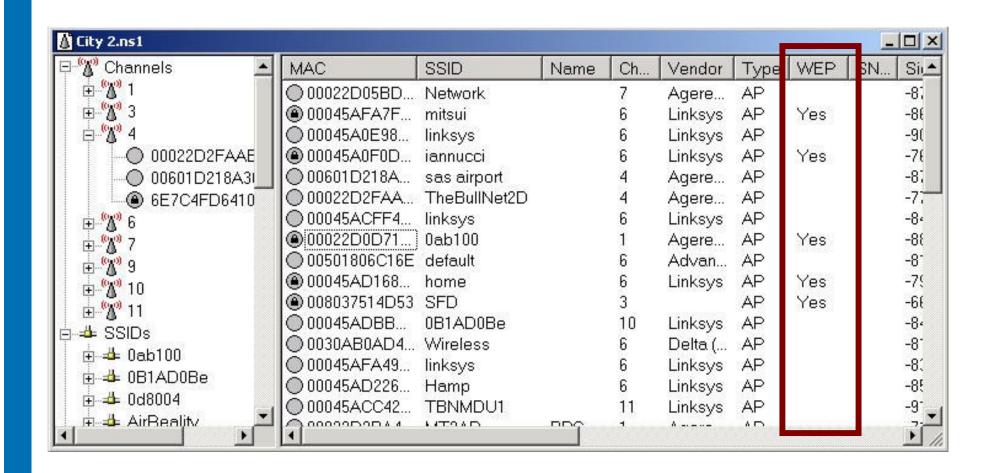
General: Wireless access point locater;

denotes whether WEP is enabled;

displays signal-to-noise ratio



Locate Rogue Wireless Access Points





Stealth Surfer

Price: US \$29.95

Link: <u>www.stealthsurfer.biz</u>

General: Anonymous surfing tool; also includes some

added features such as cookie erasing and

pop-up blocking.





AirMagnet

Price: Varies by product type

Link: <u>www.airmagnet.com</u>

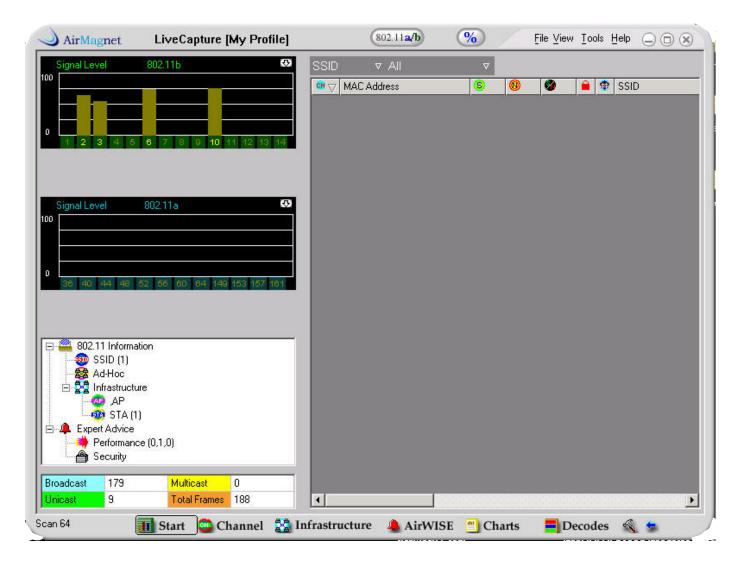
General: Wireless network analyzer; site surveyor;

security analyzer.

KEY TOOL FOR WIRELESS NETWORKS!



AirMagnet Wireless Analyzer





GPS + Antennas at <u>www.fab-corp.com</u>





Conclusion

- Play with tools on the Laura's Lab Kit.
- Join the Protocol Analysis Institute mailing list online at <u>www.packet-level.com</u>.
- Work with the tools listed (with appropriate authorization, of course).
- Send me your tools list!