

### Ethical Hacking and Countermeasures Version 6



**Module III** Footprinting



Mason is fuming with anger! The notebook which he had ordered online from *Xmachi Inc.*, did not have the configuration that he had requested.

When contacted, the customer care department gave a cold response. Vengeance crept into his mind. Finally he decided to teach the notebook manufacturer a lesson.

Being a Network Administrator of his firm, he knew exactly what he was supposed to do.

What will Mason do to defame the notebook manufacturer?

What information will Mason need to achieve his goal?



#### **Reports Says FBI Misused Information-Gathering Power**

BY DAN EGGEN - The Washington Post March 14, 2008 URL: http://www2.nysun.com/article/72916

WASHINGTON — The FBI continued to improperly obtain private telephone, e-mail, and financial records five years after it was granted expanded powers under the USA Patriot Act, according to a report issued yesterday.

In a review focusing on FBI investigations in 2006, the Justice Department inspector general, Glenn Fine, found numerous privacy breaches by the bureau in its use of national security letters, which allowed the FBI to obtain personal information on Americans and foreigners without approval from a judge. The findings mirror a report issued by Mr. Fine's office last year, which concluded that the FBI had improperly used the letters to obtain telephone logs, banking records, and other personal data between 2003 and 2005.

The pattern persisted in 2006, Mr. Fine concluded in the report issued yesterday, in part because the FBI had not yet halted the shoddy record-keeping, poor oversight, and other practices that contributed to the problems.

"The FBI and Department of Justice have shown a commitment to addressing these problems," Mr. Fine said in a statement. "However, several of the FBI's and the Department's corrective measures are not yet fully implemented, and it is too early to determine whether these measures will eliminate the problems with the use of these authorities."

Source: http://www2.nysun.com/





#### Threat Chaos

#### March 20th, 2007 Competitive intelligence gathering

Posted by Richard Stiennon @ 2:12 pm Categories: Data Security , Trade Shows Tags:



The world of CI (competitive intelligence) spans the spectrum from analytical data gathering to seamy shoulder surfing and of course the use of custom Trojan horses. This article in Forbes describes how you can get insight into a company's future product plans by researching their job postings. In this case it turns out that Google is looking to hire the kinds of talent that would be needed to develop a GooglePhone (g-phone?).

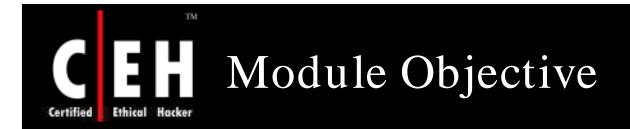
The company's own job listings, for instance, have allowed Google watchers and followers to spot advance signs of everything from its online office suite to a possible foray into the travel business.

You certainly cannot fault someone for perusing publicly available information to glean tidbits like this. While the CI work of several Israeli companies who hired Private Investigators to install Trojan horses on competitors' computers to steal files is reprehensible.

I was reminded of the practices of at least one of the Big Four auditing firms when I overheard a conversation between three obvious consulting types getting on the plane to San Francisco last night. They mentioned their own firm, a client, and the size of a deal they just won

Source: http://blogs.zdnet.com/

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#### This module will familiarize you with:

Overview of the Reconnaissance Phase

- Footprinting: An Introduction

Information Gathering Methodology of Hackers

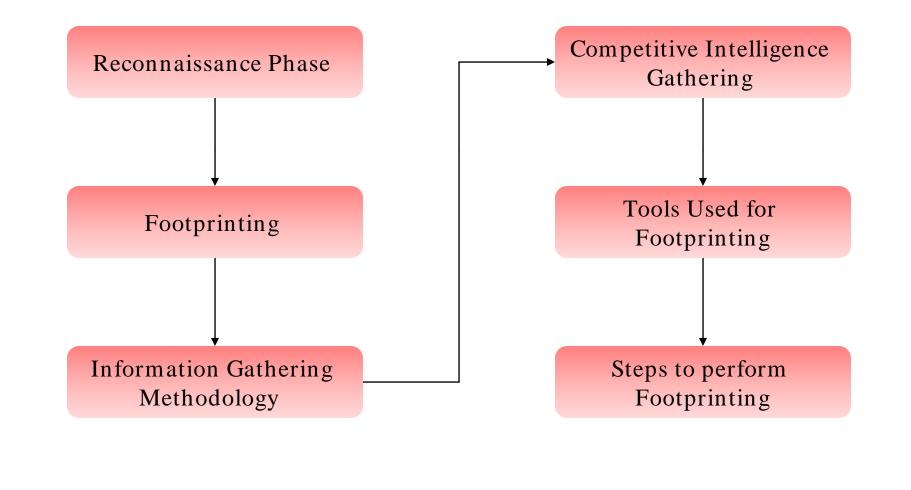
Competitive Intelligence gathering

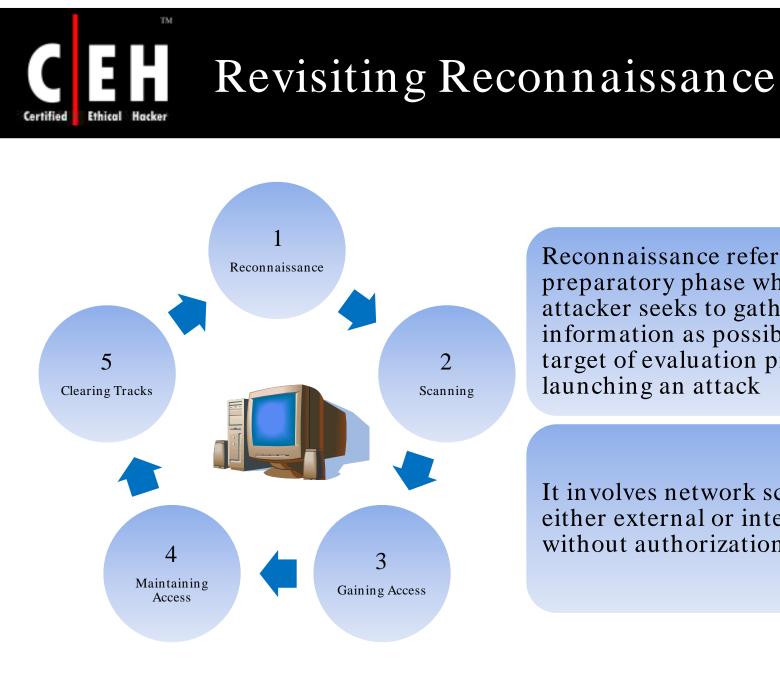
Tools that aid in Footprinting

Footprinting steps

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Reconnaissance refers to the preparatory phase where an attacker seeks to gather as much information as possible about a target of evaluation prior to launching an attack

It involves network scanning, either external or internal, without authorization



### Defining Footprinting

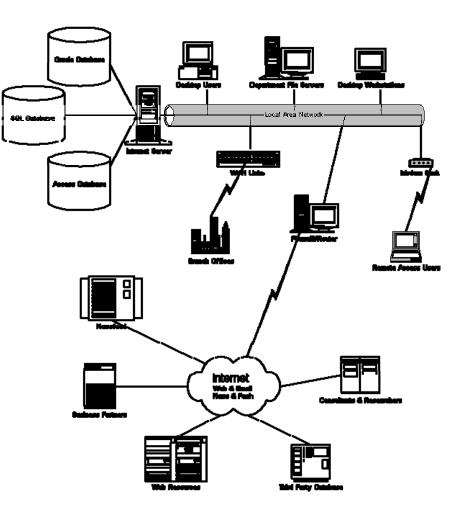


Footprinting is the blueprint of the security profile of an organization, undertaken in a methodological manner

Footprinting is one of the three pre-attack phases

An attacker spends 90% of the time in profiling an organization and another 10% in launching the attack

Footprinting results in a unique organization profile with respect to networks (Internet/intranet/extranet/wireless) and systems involved

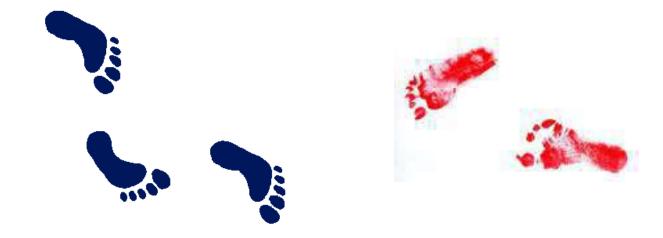




### Why is Footprinting Necessary

Footprinting is necessary to systematically and methodically ensure that all pieces of information related to the aforementioned technologies are identified

Footprinting is often the most difficult task to determine the security posture of an entity



### Areas and Information which Attackers Seek

#### Internet

• Domain Name

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- Network blocks
- IP addresses of reachable systems
- TCP and UDP services running
- System architecture
- ACLs
- IDSes running
- System enumeration (user and group names, system banners, routing tables, and SNMP info)

#### Remote access

- Analog/digital telephone numbers
- Remote system type
- Authentication mechanisms

#### Intranet

- Networking protocols used
- Internal domain names
- Network blocks
- IP addresses of reachable systems
- TCP and UDP services running
- System architecture
- ACLs
- IDSes running
- System enumeration

#### Extranet

- Connection origination and destination
- Type of connection
- Access control mechanism

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### Information Gathering

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### Information Gathering Methodology

Unearth initial information

Locate the network range

Ascertain active machines

Discover open ports/ access points

Detect operating systems

Uncover services on ports

Map the metwork

INFORMATION



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### Unearthing Initial Information

#### Hacking tool

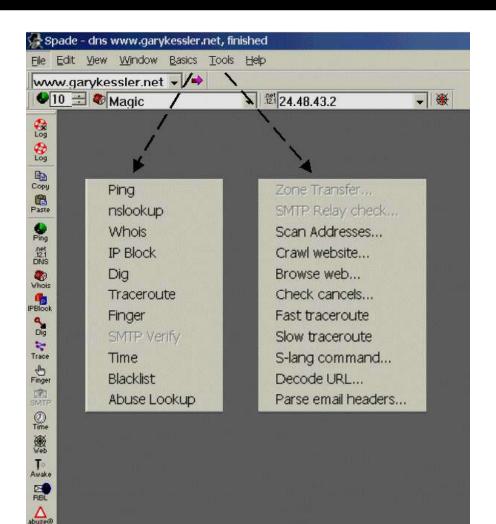
Sam Spade

#### Commonly includes:

- Domain name lookup
- Locations
- Contacts (telephone / mail)

#### **Information Sources:**

- Open source
- Whois
- Nslookup





Search for a company's URL using a search engine such as Google

Type the company's name in the search engine to get the company's URL

Google provides rich information to perform passive reconnaissance

Check newsgroups, forums, and blogs for sensitive information regarding the network

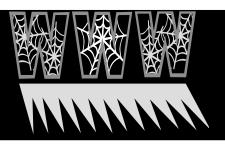






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#### By taking a guess, you may find an internal company URL

### You can gain access to internal resources by typing an internal URL

- beta.xsecurity.com
- customers.xsecurity.com
- products.xsecurity.com
- Partners.xsecurity.com
- Intranet.xsecurity.com
- Asia.xsecurity.com
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### Extracting Archive Of a Website

You can get all information of a company's website since the time it was launched at <u>www.archive.org</u>

• For example: www.eccouncil.org

You can see updates made to the website

You can look for employee's database, past products, press releases, contact information, and more







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#### From this information, get the company's infrastructure details

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For example, <u>http://people.yahoo.com</u>, <u>http://www.intellius.com</u>

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You can get satellite pictures of private residences





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- Reverse Address Lookup (name, phone from address)

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<u>Reverse Email Lookup</u>



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You can gather company's infrastructure details from job postings

Look for company's infrastructure postings such as "looking for system administrator to manage Solaris 10 network"

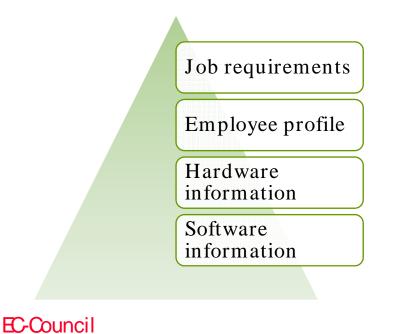
This means that the company has Solaris networks on site

• E.g.,<u>www.jobsdb.com</u>

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### Footprinting Through Job Sites(cont'd)

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| Marketing   | Retail/Wholesale  | Telecommunications          | Sales C Advance Search  |                       |
| JobsDB Resources Fo   | Job Seekers   |                             |   |                       |
| Career Tips<br>Should I continue Studying                                       | mployers look for in job seekers  | Gain co                     | ie <b>w Advise</b><br>nfidence in job interviews<br>U <b>seful Links</b>  |                       |

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### Footprinting Through Job Sites(cont'd)

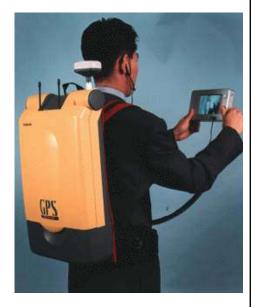
| Designation        | System Administrator / DBA (Position is based in U.S.A.)  |
|--------------------|---|
| Job Description    | This position is based in Long Beach LA, CA   |
|                    | * We are looking for a System Administrator cum DataBase Administrator, who can take care of one our Existing Account.  |
|                    | * The Major role would be to do System Software Installations, Configurations and Monitoring the impact of building out of a<br>number of environments from scratch.  |
|                    | * Major interaction of this profile would be with QA Lead / Team in Deploying the code from one to another environment.   |
|                    | Duration : 9 Months   |
| Desired Profile    | <ol> <li>Strong AIX &amp; Solaris System Admin Skills</li> <li>Should be proficient in UNIX scripting and manual commands</li> <li>WebSphere ADMIN v5 required</li> <li>Conference ADMIN v5 required</li> </ol> |
| VVVV               | <ul> <li>4) Configuration Management Tool experience (PVCS, CVS, etc.)</li> <li>5) Code deployment from one environment to another<br/>Perl Scripting</li> </ul>  |
| DESUME DE          | 6) Experience working with Hosting provider   |
|                    | ** The perfect choice would be somebody who has expereince in production environment with a Corporate Portal.   |
|                    | Plus:   |
| 1                  | * Certifications  |
|                    | * Vignette a huge plus  |
|                    | * Quality assurance on a WebSphere project<br>* Vignette release management   |
|                    | * Load testing tools (Mercury preferred.)   |
| Minimum Experience | 2 years   |
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To understand the current security status of a particular Information System, organizations perform either a Penetration Testing or other hacking techniques

Passive information gathering is done by finding out the freely available details over the Internet and by various other techniques without coming in contact with the organization's servers

Organizational and other informative websites are exceptions as the information gathering activities carried out by an attacker do not raise suspicion







### Competitive Intelligence Gathering

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### Competitive Intelligence Gathering

*Business moves fast. Product cycles are measured in months, not years. Partners become rivals quicker than you can say breach of contract.' So how can you possibly hope to keep up with your competitors if you can't keep an eye on them?"* 

Competitive intelligence gathering is the process of gathering information about your competitors from resources such as the Internet

The competitive intelligence is non-interfering and subtle in nature

Competitive intelligence is both a product and a process



# Certified Ethical Hacker

## Competitive Intelligence Gathering (cont'd)

The various issues involved in competitive intelligence are:

- Data gathering
- Data analysis
- Information verification
- Information security

#### Cognitive hacking:

- Single source
- Multiple source







### Why Do You Need Competitive Intelligence

TOP SECRET Compare your products with your competitors' offerings

Analyze your market positioning compared to the competitors

Pull up a list of competing companies in the market

Extract salesperson's war stories on how deals are won and lost in the competitive arena

Produce a profile of CEO and the entire management staff of the competitor

Predict their tactics and methods based on their previous track record

## Competitive Intelligence Resource http://www.bidigital.com/ci/

| Factiva, a Dow Jones & Reuters Co.   | Representation of the second s | Competitive Intelligence Resource Index<br>- A search engine and listing of sites-by-<br>category for finding CI resources.<br>CIseek.com |
|--|--|---|
| Search and Categories  |  | Services  |
| microsoft  | Advanced Search  | Free<br>Newsletter: Subscribe  Your<br>Name:<br>Your OK!  |
| Associations (75)<br>Associations and<br>Societies in the field of<br>CI and the Like.                     | Education (39) new<br>CI courses and training<br>programs, certificates.   | Recommend     Popular links     CI Bookstand  |
| Books (96)<br>Books related to the<br>various topics found in  | Jobs (4)<br>CI and KM jobs. CI<br>recruitment companies.   | <ul> <li>Advertising</li> <li>Alexa Toolbar</li> </ul>  |
| CI activities.   | Publications (59) new  | CI in the News  |
| Companies (1355) <sup>new</sup><br>Consulting, Market<br>Research, Online<br>Information and<br>Databases. | CI Pubs.; Newsletters,<br>Journals and Magazines.<br>Software (312)<br>CI Systems & Portals;<br>organize, gather,  | Free News Feeds for Your<br>Website<br>FeedDirect 23 Apr 2005<br>03:45:00<br>Frost & Sullivan Honors Best                                 |
| Documentation (56) Trew<br>Articles, information<br>and tutorials regarding<br>CI.                         | analyse, and share<br>information.   | Practices Leaders<br>Business Wire via Charlotte<br>Observer 23 Apr 2005<br>03:45:00<br>Frost & Sullivan Honors Best<br>Practices Leaders |

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# Companies Providing Competitive Intelligence Services

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# Carratu International

If you can't find a service that meets your requirements please email us

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#### ALPHABETICAL SERVICES LIST: CLICK ON THE NAME FOR FURTHER INFORMATION

Environmental Issues

Employee Vetting

Anti Counterfeiting

Service Directory

- Asset Tracing
- Background Profiles
- Brand Protection
- Competitive Intelligence
- Computer Forensics
- Computer Fraud
- Computer Imaging
- Computer Security
- Corporate Investigations
- Corporate Security
- Covert Audits
- Data Interrogation
- De-bugging
- Domain Name investigation
- Due Diligence

- Firstline Response
  Forensic Accounting
  Franchise Enforcement
  Fraud Investigation
  Grey Market Investigation
  Information Protection
  Information Protection
  Insurance Fraud
  Internet Investigation
  Internal Theft
  Litigation Support
  MarketWatch®
- Mediation Support
   Mergers & Acquisitions
- Money Laundering

Patent Investigations

Home News Events Brochures Employment Contact Service directory

- Pharmaceutical Intelligence
- Pharma. Patent Infringement

C A R(R)A T U

Search

- Pharma. Counterfeiting
- Pharma, Investigations
- Product Monitoring
- ▶ R-check™ search
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- Status Reporting
- Surveillance Static & Mobile
- Test Purchases
- Third Party Acquisitions
- Trademark Infringement
- Trademark In-use
- Undercover Operations

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Cl Centre Advanced Counterintelligence, Counterterrorism & Security Education

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<u>Reading</u> for Intel Professionals

Alexandria, VA | 703-642-7450 or 1-800-779-4007



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Register

#### Robert Hanssen: Colleaque, Friend, and Traitor Wednesday, 28 November 2007 at 6:30 pm; International Spy Museum, Washington, DC

CI Centre President <u>David Major</u> provides a glimpse into the real personality and psychology of Robert Hanssen, one of the most damaging spies in U.S. history. He will explore why Hanssen's betrayal was so difficult to uncover, his own theories on what motivated the spy, his perspective on Breach, and the status of U.S. counterintelligence in the wake of this profoundly important spy case. Tickets: \$23 <u>REGISTER</u>

Counterintelligence & Espionage News Terrorism Intel/ War of Ideas News Page updated: Tuesday, November 27, 2007

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## Competitive Intelligence - When Did This Company Begin? How Did It Develop

*Laser D* for Annual Reports to Stockholders & 10-Ks (Reference Room - workstation # 12)

**EDGAR database** - for 10-K and other report filed with the SEC (also **Business Database Selection Tool**)

International Directory of Company Histories (Reference - HD 2721 D36)

<u>Mergent Online</u> - company history and joint ventures (<u>Business Database</u> <u>Selection Tool</u>)

Notable Corporate Chronologies (Reference - HD 2721 N67 1995)

ORION, UCLA's Online Library Information System (<u>Business Database</u> <u>Selection Tool</u>)

Enter Search Terms: general electric [for books on GE], click on button: Search Subject Words

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## Competitive Intelligence - Who Leads This Company

<u>ABI/INFORM Global</u> (<u>Business Database Selection Tool</u>) Search for: microsoft in Subject; AND; biographies in Subject; Search

<u>Hoover's Online</u> - Company Profile includes Key People. (<u>Business Database Selection</u> <u>Tool</u>) Also in print as *Hoover's Handbook of American Business* (Reference - HG 4057 A28617)

<u>National New spaper Index</u> (Business Database Selection Tool) Type in: exxon ; Search

Reference Book of Corporate Managements (Reference Index Area, section 5)

Who's Who in Finance and Industry (Reference Index Area, section 5)

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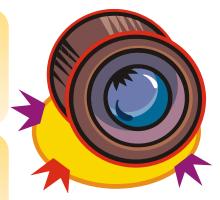
## Competitive Intelligence - What Are This Company's Plans

<u>ABI/INFORM Global</u> (Business Database Selection Tool) Search for: mci in Company/Org.; AND; alliances in Subject; OR; market strategy in Subject; Search

LexisNexis Academic (Business Database Selection Tool) Business; Industry & Market; Keyword: Palm; Industry: Computer & Telecom; Date: Previous six months; Search

<u>Business & Industry® (Web)</u> (Business Database Selection Tool) 200X BUS\_IND, Open; Search/Modify, Company Name; Search/Modify, Business Subject, Modify: Company Forecasts; OK

*Factiva* (Business Database Selection Tool) Enter free-text terms: intel near plans; Select date: in the last year; Select sources: All Content; Run Search





## Competitive Intelligence - What Does Expert Opinion Say About The Company

<u>ABI/INFORM Global</u> [academics] (<u>Business Database Selection Tool</u>)

*First Call* [analyst reports] (Business Database Selection Tool)

FINDEX: Directory of Market Research Reports (Reference - HF 5415.2 F493)

Market Research Monitor (Business Database Selection Tool)

<u>Multex</u> [analyst reports] (<u>Business Database Selection Tool</u>)

Nelson's Directory of Investment Research (Reference - HG 4907 N43)

*Wall Street Transcript "TWST Roundtable Forums"* and *"CEO Forums"* Features (Unbound Periodicals - 2nd floor) [analysts' discussion of a given industry, see this <u>sample issue</u> with Semiconductor Equipment Industry Roundtable]

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## Competitive Intelligence - Who Are The Leading Competitors

Business Rankings Annual (Reference - HG 4057 A353)

<u>*Hoover's Online*</u> - Top Competitors free, More Competitors available, use (<u>Business Database Selection Tool</u>)

Market Share Reporter (Reference - HF 5410 M37)

<u>U.S. Patent and Trademark Office</u> [identify players in emerging product areas, see also <u>other patent resources</u>]

<u>Reference USA</u> [companies by SICs and more] (<u>Business Database</u> Selection Tool)

<u>TableBase (Web)</u> [find market shares within articles] (<u>Business</u> <u>Database Selection Tool</u>)

Ward's Business Directory of U.S. Private and Public Companies (Reference Room, Index Section 1)

World Market Share Reporter (Reference - HF 1416 W67)



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## Competitive Intelligence Tool: Trellian

Trellian compiles and analyzes internet usage statistics to create a powerful Competitive Intelligence tool that no business should be without



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#### Link Intelligence

Find out which sites send the most traffic to your competitors.



#### Search Term Intelligence

What keywords drive the most traffic to competing sites?



Identify search terms your competitors are advertising on.



#### Benchmarking

Find out how your business compares with other competitors.



#### Keyword Rankings

Identify the search terms and keywords that your competitors rank on.



#### Affiliate Partners

Identify the top Affiliate partners sending traffic to your competitors.



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## Competitive Intelligence Tool: Web Investigator

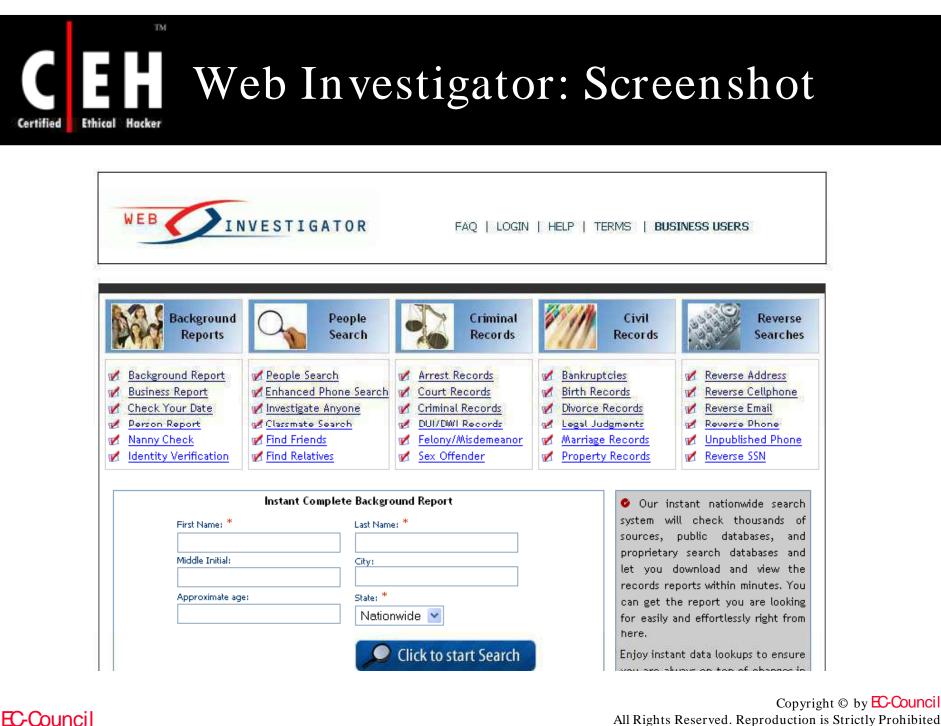
Web Investigator checks sources, public databases, and proprietary search databases, and allows to download and view reports of records

You can get the report you are looking for



Quickly and efficiently search and locate public records online





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RelevantNoise is a subscription-based online search service that mines social media for business intelligence

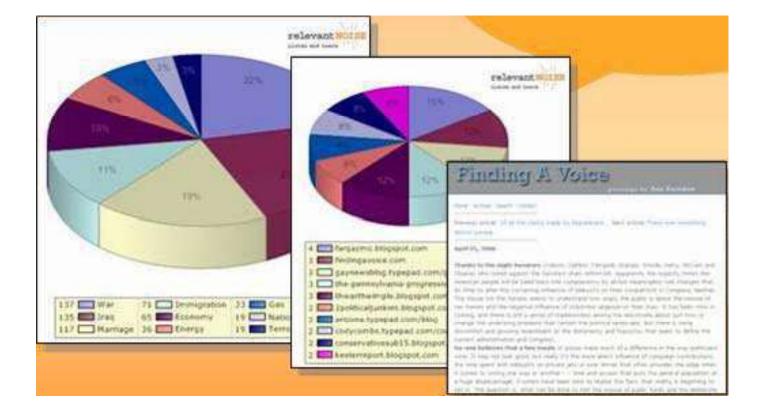
It quickly says about your brands across social media and their impact

It helps a business to monitor the blog buzz about its products, services, and company's reputation, plus those of its competitors

It also assesses the relative influence of bloggers using factors such as their tenure, how often they post, and the number of incoming links to help you determine how much the opinions really matter



## RelevantNoise: Screenshot



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The Reputica Dashboard provides online source of information about your reputation, with links to the primary sources which caused your Reputica rating to go up or down

You can see how your rating has changed over time, and how it is compared with other companies or competitors









MyReputation finds out everything that is being said about you online and gets rid of the content you do not like

You can find detailed information from:

Social networks (MySpace, Facebook, LiveJournal, Bebo, and more)

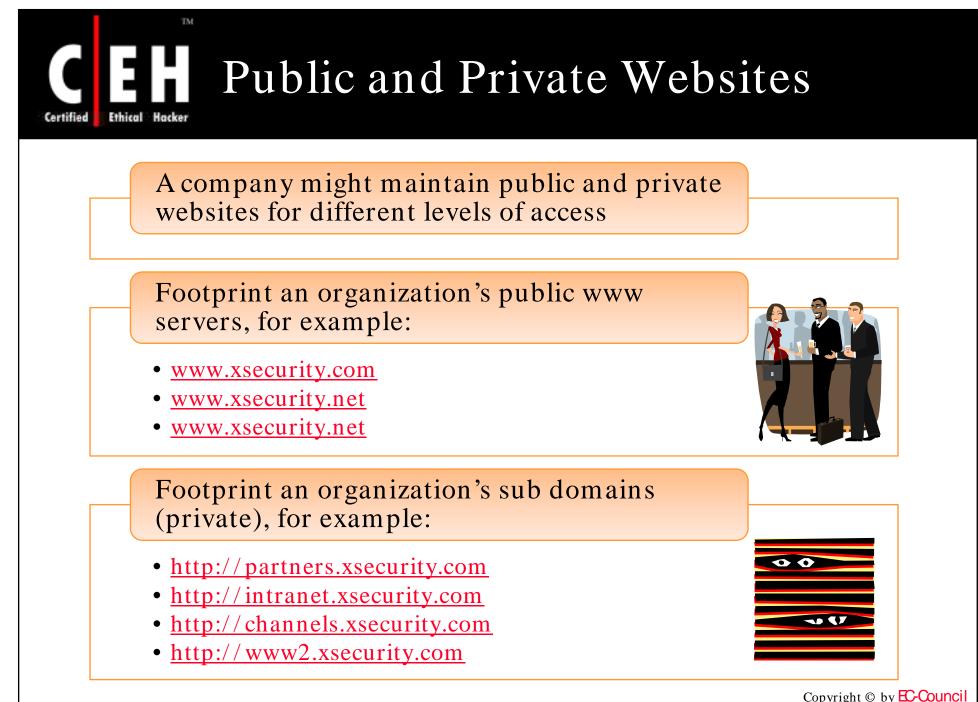
Professional reviewed websites

Blogs

Online news sources

Photograph, video, and audio sharing sites (Flickr, YouTube, etc.)

Millions of additional sites on the "open Internet"



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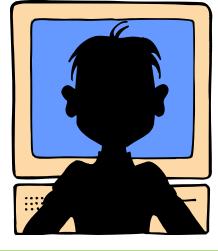
# Footprinting Tools

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## Some Footprinting Tools:

- Whois
- Nslookup
- ARIN
- Neo Trace
- VisualRoute Trace
- SmartWhois
- eMailTrackerPro
- Website watcher
- Google Earth
- GEO Spider
- HTTrack Web Copier
- E-mail Spider



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## Sensepost Footprint Tools - 1 www.sensepost.com



## BiLE.pl

- BiLE leans on Google and HTTrack to automate the collections to and from the target site, and then applies a simple statistical weighing algorithm to deduce which websites have the strongest relationships with the target site
- Command:
  - perl BiLE.pl www.sensepost.com sp\_bile\_out.txt

### BiLE-weigh.pl

- BiLE-weigh, which takes the output of BiLEand calculates the significance of each site found
- Command:
  - perl bile-weigh.pl www.sensepost.com sp\_bile\_out.txt.mine out.txt

## tld-expand.pl

- The tld-expand.pl script is used to find domains **n** any other TLDs
- Command:
  - perl exp-tld.pl [input file] [output file]



## Sensepost Footprint Tools - 2 www.sensepost.com



### vet-IPrange.pl

- The results from the BiLE-weigh have listed a number of domains with their relevance to the target website
- Command:

```
•perl vet-IPrange.pl [input file] [true domain file] [output file]
<range>BiLE-weigh.pl
```

#### qtrace.pl

- qtrace is used to plot the boundaries of networks. It uses a heavily modified traceroute using a #custom compiled hping# to perform multiple traceroutes to boundary sections of a class C network
- Command:
  - perl qtrace.pl [p\_address\_file] [output\_file]

#### vet-mx.pl

- The tool performs MX lookups for a list ofdomains, and stores each IP it gets in a file
- Command:
  - perl vet-mx.pl [input file] [true domain file] [output file]

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## Sensepost Footprint Tools - 3 www.sensepost.com



#### jarf-rev

- jarf-rev is used to perform a reverse DNS lookup on an IP range. All reverse entries that match the filter file are displayed on the screen
- Command:
  - perl jarf-rev [subnetblock]
  - perl jarf-rev 192.168.37.1-192.168.37.118

### jarf-dnsbrute

- The jarf-dnsbrute script is a DNS bruteforcer when DNS zone transfers are not allowed. jarf-dnsbrute will perform forward DNS lookups using a specified domain name with a list of names for hosts
- Command:
  - perl jarf-dnsbrute [domain\_name] [file\_with\_names]



Big Brother is designed to see how network is performing in near real-time from any web browser

> It displays status information as web pages or WML pages for WAP-enabled devices

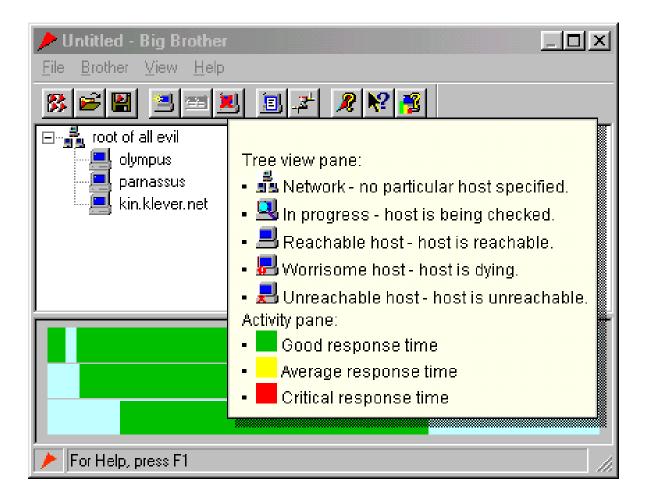
> > Big Brother uses a client-server architecture combined with methods which push and pull data



Network testing is done by polling all monitored services from a single machine, and reporting these results to a central location (BBDISPLAY)

Big Brother includes support for testing ftp, http, https, smtp, pop3, dns, telnet, imap, nntp, and ssh servers





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| big brother          |   |   |  |   |   |   |      |   | ġ | Man | e Ma | r 6 t | 7:0 | 1941 (<br>1 E1 |       |
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| mtibb4.com           |   |   |  |   |   |   |      |   |   |     |      |       |     |                |       |
| www.unixish          |   |   |  |   |   |   |      |   |   |     |      |       |     |                |       |
| www.root.sh          |   |   |  |   |   |   |      | ٠ |   |     |      |       |     |                |       |
| www.login.shi        |   |   |  |   |   |   |      |   |   |     |      |       |     |                |       |
| nowhere.to.be.four   | d |   |  |   |   |   |      |   |   |     |      |       |     |                |       |



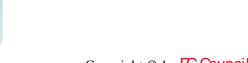


The BiLE suite contains a number of PERL scripts that can be used by a Penetration Tester to aid in the enumeration phase of a test

BiLE itself stands for Bi-directional Link Extraction utilities

The suite of tools can be used in the footprinting process to find both obvious and non-obvious relationships between disparate

With this information, a Pen Tester may then decide to try and access sites with close relationships with the target as a stepping stone into the target network







## Tool: Alchemy Network Tool

Alchemy Network Tools is a software package containing a set of network analysis and diagnostic utilities

It aids network administrators to maintain and manage their networks in the nice graphical interface

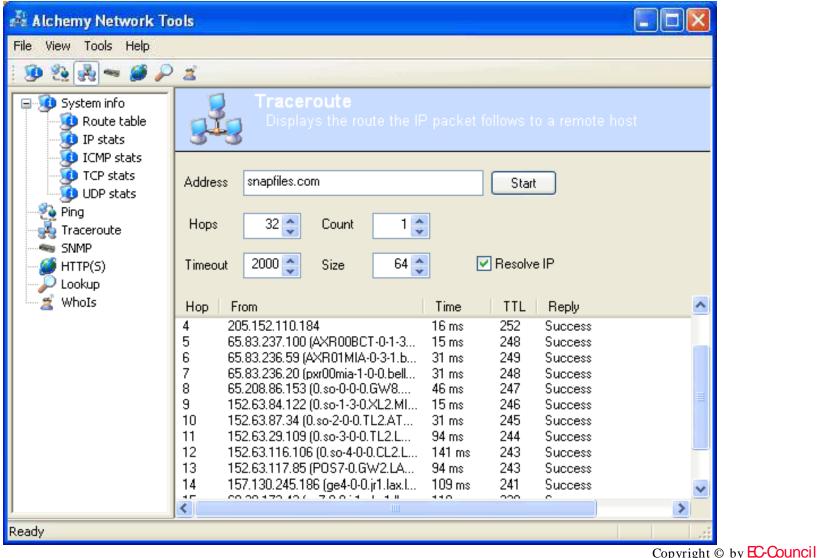
Alchemy Network Tools contains the following network utilities:

- Ping
- Traceroute
- NSLookup
- Whois
- HTTP/HTTPS request sender
- SNMP request sender



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# Alchemy Network Tool: Screenshot



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## Tool: Advanced Administrative Tool (AA)

Advanced Administrative Tools is a multithreaded network and system diagnostic tool

It is designed to gather detailed information and availability status for network and local computer

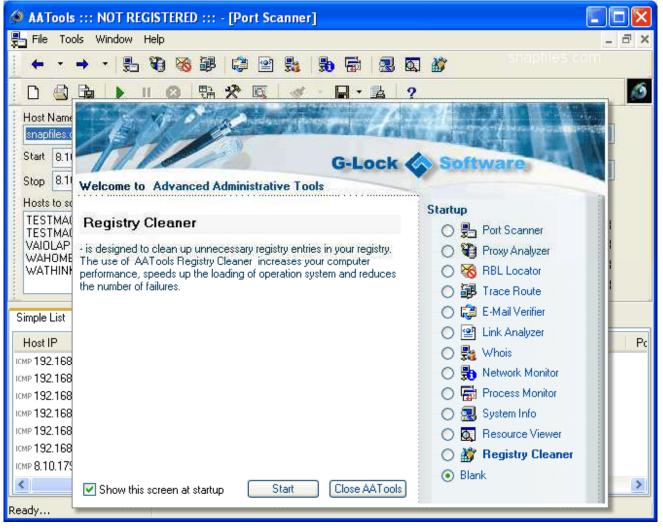
#### It combines 12 utilities:

- Port Scanner
- Proxy Analyzer
- RBL Locator
- CGI Analyzer
- Email Verifier
- Links Analyzer
- Network Monitor
- Process Monitor
- Whois
- System Info
- Resource Viewer
- Registry Cleaner



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## Advanced Administrative Tool: Screenshot



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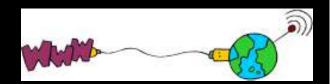
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My IP Suite combines Domain-to-IP Converter, Batch Ping, Tracert, Whois, Website Scanner and Connection Monitor as well as an IP-to-Country Converter into a single interface

With powerful IP&Web tool you can:

- Lookup IP address for a single orlist of domain names and vice versa
- Find out the country associated with single or list of domains or IP addresses
- Perform batch and continuouspings on multiple servers
- Trace IP addresses to their destnation and investigate connection problems
- Determine name, date, last-modified, version, and operation system of the remote web server
- Allow to scan any given web site and produce a list of links found in the site, using several criteria to filter results
- Monitor all TCP IP connections from computer to the Internet automatically

# C EH My IP Suite: Screenshot 1

| 😹 My IP Suite  |   | ×        |
|--|---|----------|
| Eile Function View Help  |   |          |
| <ul> <li>IP-to-Domain Converter</li> <li>Batch Ping</li> <li>IP-to-Country Converter</li> <li>Traceroute</li> <li>Whois</li> </ul> | Website Scanner         Http://www.shareit.com       Image Scan       Im |          |
| 🥩 Website Scanner  | gif       http://www.shareit.com/pages/e-commercefulfillmentservices/e-commercefulfillmentservices.gif         gif       http://www.shareit.com/pages/freepalmpilotdownloads/freepalmpilotdownloads.gif         htm       http://www.shareit.com/pages/freepalmpilotdownloads/freepalmpilotdownloads.htm         gif       http://www.shareit.com/pages/freepalmpilotdownloads/freepalmpilotdownloads.htm         gif       http://www.shareit.com/pages/freepalmpilotdownloads/freepalmpilotdownloads.htm  |          |
| ★ Local Information  | http://www.shareit.com/pages/internationaldistribution/internationaldistribution.htm         gif       http://www.shareit.com/pages/softwarepublishing/softwarepublishing.gif         htm       http://www.shareit.com/pages/softwarepublishing/softwarepublishing.htm         htm       http://www.shareit.com/pages/palmfreeware/palmfreeware.htm         gif       http://www.shareit.com/pages/palmfreeware/palmfreeware.gif         gif       http://www.shareit.com/pages/fulfillmentsoftware/fulfillmentsoftware.gif         htm       http://www.shareit.com/pages/fulfillmentsoftware/fulfillmentsoftware.htm  |          |
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# CERTIFIED Ethical Hacker My IP Suite: Screenshot 2

| My IP Suite               |                              |  |  |                                     |                |   |             |
|---------------------------|------------------------------|--|--|-------------------------------------|----------------|---|-------------|
| \$                        | IP-to-D                      | omain Cor                                    | werter                                   |                                     |                |   |             |
| 🧐 IP-to-Domain Converter  | Domain Name<br>IP Address    | www.yahoo.<br>216.109.118.6<br>216.109.118.6 | 57                                       | IP Address<br>Domain /<br>Host Name | s 216.109.113  | 8.71<br>cn.yahoo.com  | ]•          |
| 🥳 Batch Ping              |                              | 216.109.118.7<br>216.109.118.7               | 70                                       |                                     | hborhood 20    |   |             |
| 💩 IP-to-Country Converter |                              | 216.109.118.7<br>216.109.118.7               |  | resolve fo                          | r the last and | e an IP address a<br>next number IPs."<br>very useful to se | This is not |
| 🀝 Traceroute              | Host Name                    | www.yahoo.                                   | akadns.net                               |                                     |                | are hosted by the   |             |
| 🌀 Whois                   | 66.218.71.0                  | ^  | Batch Conversion                         | Domain / Host Name                  |                | IP Address  | ^           |
| 😰 Website Scanner         | 66.218.71.1<br>66.218.71.2   |  |  | tx1.udb.scd.yahoo.com               |                | 66.218.71.36  |             |
|                           | 66.218.71.3                  |  |  | tx2.udb.scd.yahoo.com               |                | 66.218.71.37  |             |
| 🐝 Connection Monitor      | 66.218.71.4                  |  |  | tx3.udb.scd.yahoo.com               |                | 66.218.71.38  |             |
|                           | 66.218.71.5<br>66.218.71.6   |  | From Domain / Host                       | tx4.udb.scd.yahoo.com               |                | 66.218.71.39  |             |
|                           | 66.218.71.7                  |  | Name to IP Address                       | tx5.udb.scd.yahoo.com               |                | 66.218.71.40  |             |
| \$                        | 66.218.71.8                  |  |  | tx6.udb.scd.yahoo.com               |                | 66.218.71.41  |             |
|                           | 66.218.71.9                  |  |  | tx7.udb.scd.yahoo.com               |                | 66.218.71.42  |             |
| 🦄 Local Information       | 66.218.71.19<br>66.218.71.20 |  | From IP Address to<br>Domain / Host Name | tx8.udb.scd.yahoo.com               |                | 66.218.71.43  |             |
|                           | 66.218.71.21                 |  |  | nfs-tx100.udb.scd.yahoo.o           | om             | 66.218.71.44  |             |
|                           | 66.218.71.22                 |  | Done!                                    | nfs-tx101.udb.scd.yahoo.d           |                | 66.218.71.45  |             |
|                           | 66.218.71.23<br>66.218.71.24 |  |  | udb1.udb.scd.yahoo.com              | ~~~~           | 66.218.71.47  |             |
|                           | 66.218.71.25                 |  |  | dns1.scd.yahoo.com                  |                | 66.218.71.48  | ~           |
|                           | 66.218.71.26<br>66.218.71.27 | ~  |  | <                                   |                | 00.210.71.40  | >           |
|                           |                              |  | -  |                                     |                |   |             |

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# Whois Tools

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## Wikto Footprinting Tool

\_ 🗆 × Wikto by SensePost Wikto Mirror & Fingerprint Googler BackEnd GoogleHacks SystemConfig. Quit WIKTO Start Mining Directories Directories (results) Skip to files Files Import from Mirror cl cl Import from Import from Googler Mirror Skip directory cl admin ۰ login /a ۰ logon Export Results Stop Mining /access backup /active backend /adm users /admin logs www.sensepost.com IP/DNS name /\_admin test /administrator upload 80 Port /administration INSTALL\_admin /app 403,401,200,302,301 Trig Codes(Dir) adm /apps admin /archive 200,302,301,403 Trig Codes (File) admin\_login /archives admin\_logon /asp 🗩 HEAD 🛛 🕥 GET administrator /back adminlogon Preserve results /backup client /back-up clients /bak cmd /bakup Load Directories Update from customer /bak-up SensePost data . Load File Names /basic database • /bea Click update 💌 Load File Types /bin File types cl Files (results) /binaries htm ٠ /broken ۸ html /c Use Al 📃 0.700 🕂 shtml /cc asp /ccs Fuzz status asa /cache doc /cgi jsp /cgibin jsa /cgi-bin txt. /cgi-win pl /class

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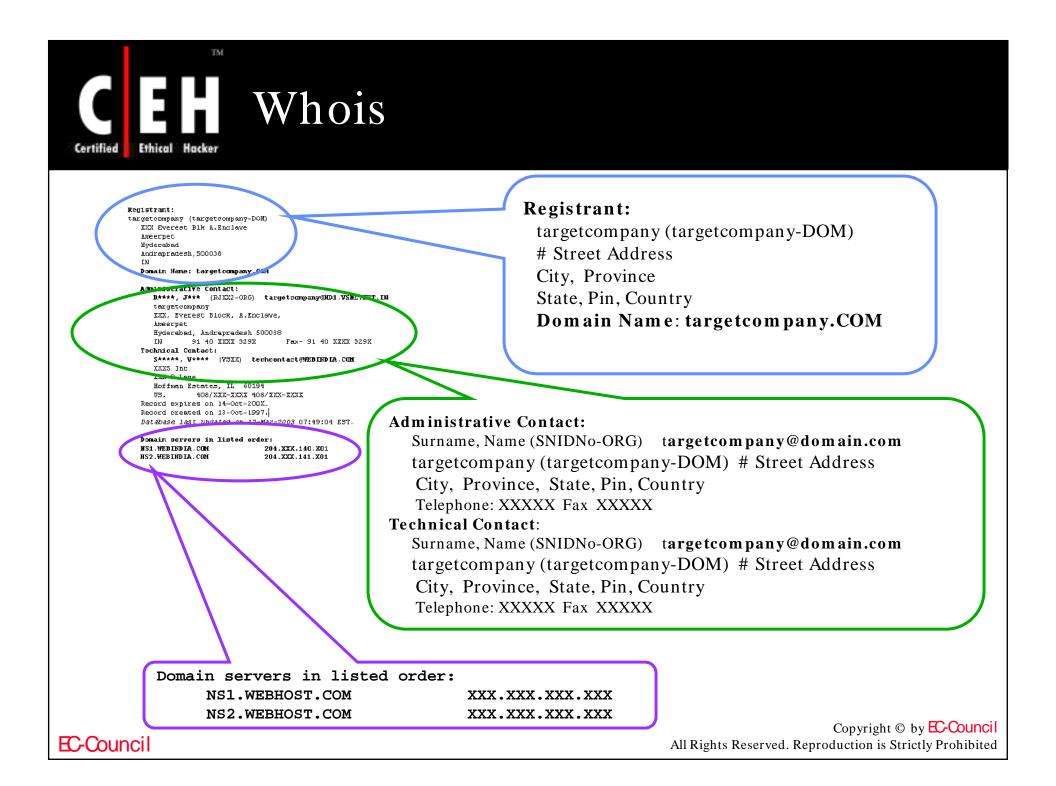


# With whois lookup, you can get personal details and contact information about the domain

• For example, www.samspade.com

| what's eccouncil and  |
|---|
| @whois Magic  |
| Server Used (whois or sig)  |
| eccouncil.org = [ 64.90.176.10 ]  |
| Demain ID: DB11881274.BOB<br>Domain Name: ECCOUNCIL ORG<br>Created On: 14-Dac-2001 10: 13: 0<br>Last Updated On: 19-Aug-2004 03<br>Exgination Date: 14-Dec-2005 10: 1<br>Spansoring Registrar: Tucows lac.<br>Status: OK<br>Registrant D: 101V28R2DWR840A<br>Registrant Organization: Internation<br>Registrant Street1 67 Wall Storet<br>Registrant Street1 67 Wall Storet<br>Registrant Street3<br>Registrant Street3<br>Registrant Street3<br>Registrant City: New York<br>Registrant Postal Code: 10005-315<br>Registrant Phone: 1.2127098253<br>Registrant Phone: 1.2127098253<br>Registrant Phone Ent:<br>Registrant Phone Ent:<br>Registrant Phone Ent:<br>Registrant Phone Ent:<br>Registrant Phone Ent:<br>Registrant Final Ent:<br>Registrant Enail Forum@eccount |

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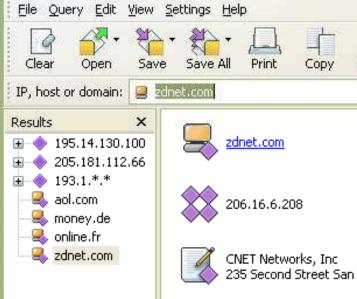




# Tool: SmartWhois

Paste

😥 SmartWhois



ADMIN

http://www.softdepia.com/smartwhois downloa d 491.html

SmartWhois is a useful network information utility that allows you to find out all available information about an IP address, host name, or domain, including country, state or province, city, name of the network provider, administrator, and technical support contact information

235 Second Street San Francisco CA 94105 US

Host Master CNET Networks, Inc. 235 Second Street San Francisco CA 94105 US hostmaster@cnet.com +1.4153442000

Host Master CNET Networks, Inc. TECH 235 Second Street San Francisco CA 94105 US hostmaster@cnet.com +1.4153442000

Unlike standard Whois utilities. SmartWhois can find the information about a computer located in any part of the world, intelligently querying the right database and delivering all the related records within a short time

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#### Done



ActiveWhois is a WHOIS tool that allows to retrieve domain specific information and displays it in an organized overview

> Information includes DNS information, IP address, and connection speed, as well as all standard domain owner information

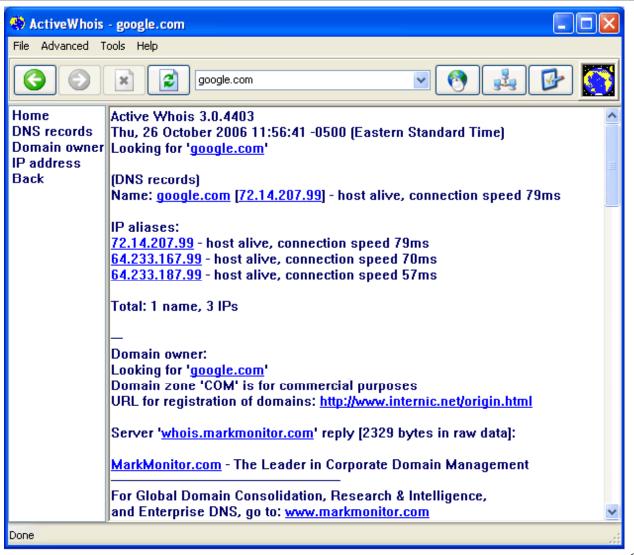
> > The program hyperlinks all additional domains that are found in results (emails and URLs); launching a lookup for a linked domain quickly by simply clicking on it

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ActiveWhois Browser also includes a Direct Whois option, which allows to manually specify server to query as well as supports international domains and Internet Explorer/Firefox integration



### ActiveWhois: Screenshot



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LanWhois allows to lookup owner's information for any given domain name or IP address

It archives results for easy reference and also allows to save or print information

This program includes a database of international WHOIS servers that can be updated online

In addition, LanWhois offers IE toolbar integration for easy access from the browser

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# **CEH** LanWhois: Screenshot

| ile Query Edit H  | diseases in a  |                   | *                   | -   | -                 |              | 1.22          |                                     |                                     |
|---|--|-------------------|---------------------|---|-------------------|--------------|---------------|-------------------------------------|-------------------------------------|
| 🤣 🥑 💞   | ) 🖄  |                   |                     | 1   | 9                 | 0            | 0             |                                     |                                     |
| Address   |  |                   |                     |   |                   | Adm          | inistrative ( | Contact:                            |                                     |
| google.com  |  |                   |                     | 1   | ~                 |              |               | C-1340142) Goog                     |                                     |
| Query as domain   | 1  |                   |                     |   |                   |              |               | ore Pkwy Mounta<br>ogle.com +1.650  | in View CA 94043 US<br>3300100 Fax- |
| Server  |  |                   |                     |   |                   | +1.6         | 506181499     |                                     |                                     |
| whois nic ac  |  |                   |                     |   | 14                |              |               | act, Zone Contac<br>C-1340144) Goor |                                     |
| Use Rating  |  |                   |                     |   |                   | 2400         | E. Baysh      |                                     | in View CA 94043 US                 |
| Results   |  |                   |                     |   | Ĵ.                |              | 506181499     |                                     | 5500100 Fax-                        |
| Address   | Server   |                   | Date                |   |                   | 1 25         | S             |                                     | 223                                 |
| 🗋 google.com<br>🗋 spychecker.com  | whois, all dom<br>whois, registe   |                   | 000000              | 005 12:52<br>005 12:51:                           | 1997 I.           |              |               | 1997-Sep<br>2011-Sep-               | 14.                                 |
| snapfiles.com   | whois.goda<br>whois.netv   | g q               | uery inf            | ormation  |                   |              |               | Close                               | 10:42:46.                           |
| 148.122.2.11<br>yahoo.com<br>rx-name.net<br>icq.com<br>mozila.org<br>netscape.org | whois, ripe,<br>whois, aldo<br>whois, drec<br>whois, regis<br>whois, pir, o<br>whois, pir, o | i) Ret<br>i) IP A | rieve IP<br>(ddress | about goog<br>Address o<br>is 216.239<br>main nam | f goog<br>1.57.99 | gle.com<br>} | g to 216.239  | 57.99                               |                                     |
|   |  |                   |                     |   |                   |              |               |                                     | porate Domain                       |
|   | 8 <u>1</u>   |                   |                     |   | -                 | and t        | nterprise     | UNS, go to: www                     | MarkMonitor.com                     |
|   |  |                   |                     |   |                   | 830 3990     |               |                                     |                                     |

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| Certified Ethical Hacker Tool: CountryWhois |                    |
|---|--------------------|
|   | Tool: CountryWho1s |

CountryWhois is a utility for identifying the geographic location of an IP address

It is especially focused on IP-to-country identification and does not need to contact external Whois servers

Can be used to:

- Analyze server logs
- Check e-mail address headers
- Identify online credit card fraud
- Determine quickly and accurately the country of origin by IP address





The following result show the product most probably uses a reverse lookup to resolve the IP addresses and manages to accurately identify the country of origin

| Status<br>Status<br>Completed<br>Completed<br>Completed<br>Completed<br>Completed<br>Completed | IP Address<br>207.46.232.182<br>91.84.23.170<br>212.58.228.155<br>213.171.218.210<br>213.171.218.183<br>205.206.231.13<br>64.112.229.131 | Country<br>United States<br>United Kingdom<br>United Kingdom<br>United Kingdom<br>United Kingdom<br>United Kingdom  | Country Code US<br>GB<br>GB<br>GB<br>GB<br>GB<br>GB<br>GB<br>CA            |
|--|--|---|--|
| Status<br>Completed<br>Completed<br>Completed<br>Completed<br>Completed<br>Completed           | 207.46.232.182<br>91.84.23.170<br>212.58.228.155<br>213.171.218.210<br>213.171.218.183<br>205.205.231.13                                 | <ul> <li>United States</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>Canada</li> </ul> | Country Code US<br>GB<br>GB<br>GB<br>GB<br>GB<br>GB                        |
| Completed<br>Completed<br>Completed<br>Completed<br>Completed                                  | 207.46.232.182<br>91.84.23.170<br>212.58.228.155<br>213.171.218.210<br>213.171.218.183<br>205.205.231.13                                 | <ul> <li>United States</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>Canada</li> </ul> | Country Code US<br>GB<br>GB<br>GB<br>GB<br>GB<br>GB                        |
| Completed<br>Completed<br>Completed<br>Completed<br>Completed                                  | 207.46.232.182<br>91.84.23.170<br>212.58.228.155<br>213.171.218.210<br>213.171.218.183<br>205.205.231.13                                 | <ul> <li>United States</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>Canada</li> </ul> | US<br>GB<br>GB<br>GB<br>GB<br>GB   |
| Completed<br>Completed<br>Completed<br>Completed<br>Completed                                  | 207.46.232.182<br>91.84.23.170<br>212.58.228.155<br>213.171.218.210<br>213.171.218.183<br>205.205.231.13                                 | <ul> <li>United States</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>Canada</li> </ul> | US<br>GB<br>GB<br>GB<br>GB<br>GB   |
| Completed<br>Completed<br>Completed<br>Completed<br>Completed                                  | 91.84.23.170<br>212.58.228.155<br>213.171.218.210<br>213.171.218.183<br>205.206.231.13   | <ul> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>Canada</li> </ul>                        | GB<br>GB<br>GB<br>GB   |
| Completed<br>Completed<br>Completed<br>Completed   | 212.58.228.155<br>213.171.218.210<br>213.171.218.183<br>205.206.231.13   | <ul> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>United Kingdom</li> <li>Canada</li> </ul>  | GB<br>GB<br>GB   |
| Completed<br>Completed<br>Completed  | 213.171.218.210<br>213.171.218.183<br>205.206.231.13   | United Kingdom Mited Kingdom  | GB<br>GB   |
| Completed<br>Completed   | 213.171.218.183<br>205.206.231.13  | 😹 United Kingdom  | GB   |
| Completed  | 205.206.231.13   | 🛃 Canada  |  |
|  |  |   | CA   |
| Completed  | 64 112 229 131   |   |  |
|  | 07.112.223.1JI   | 🧮 United States   | US   |
| Completed  | 213.193.212.208  | 🚍 Netherlands   | NL   |
| Completed  | 66.39.102.85   | 🧮 United States   | US   |
| Completed  | 213.219.122.11   | 💳 Estonia   | EE   |
|  | <b>*</b>   |   | >  |
| e  | Count  |   | Percen   |
|  | 3  |   | 30.009   |
|  | 4  |   | 40.00%   |
|  | 1  |   | 10.00  |
|  | 1  |   | 10.00  |
|  | 1  |   | 10.004   |
|  |  |   | )  |
|  | Completed  | Completed 213.219.122.11  e Count 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   | Completed         213.219.122.11         Estonia           e         Count |

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WhereIsIP helps to find out the geographic location of an IP address, domain name, ICQ contacts, website, and e-mail sender

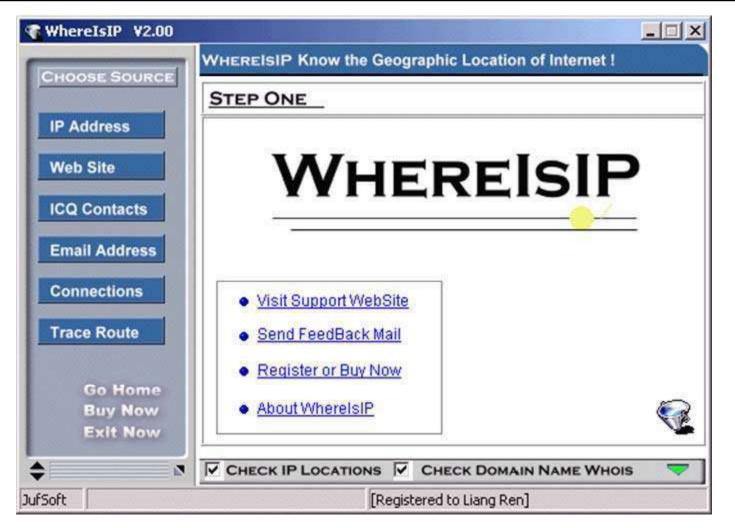
Features:

- Powerful Internet address geographic location analysis ability
- Domain Name research function; it can reverse-resolve a IP address to domain name





### WhereIsIP: Screenshot





ip2country is utility for converting IP's address to the country's name

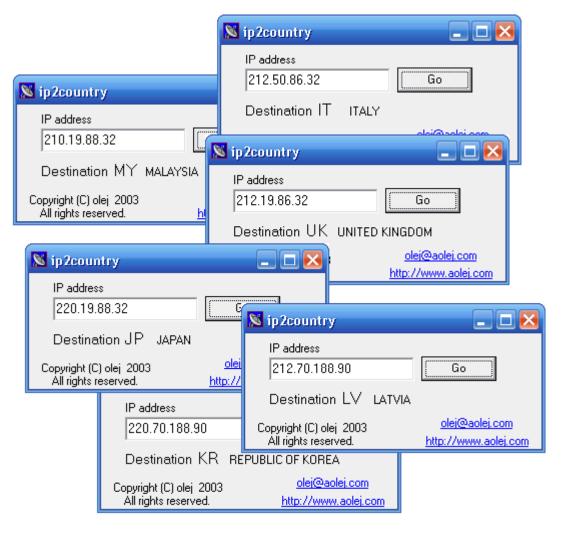
Enter any IP address and the country's name is displayed



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### Ip2country: Screenshot



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Use CallerIP to easily see when someone has connected to the computer, report IP address, and run a trace on that IP address

Using CallerIP Professional, CallerIP can be setup as a server, so you can monitor computer and its connections

Features:

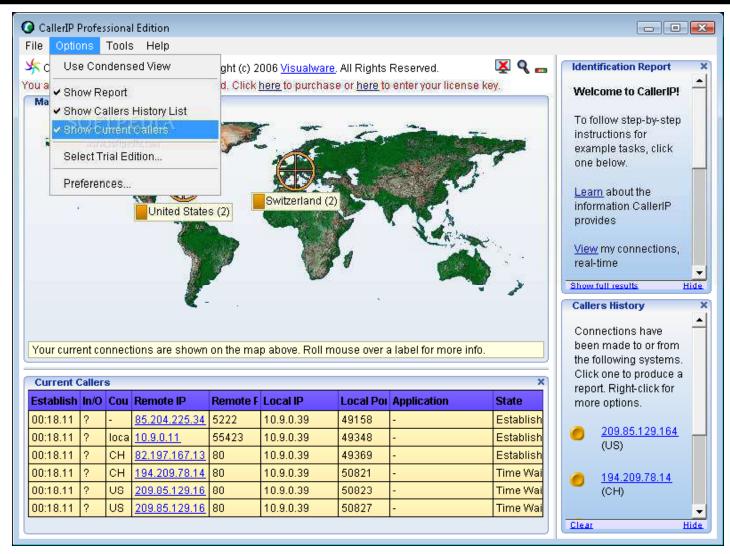
- Receives instant alerts for high risk connections and back doors
- Identifies spyware and suspicious connections to your system
- Reports abuse and illicit activity



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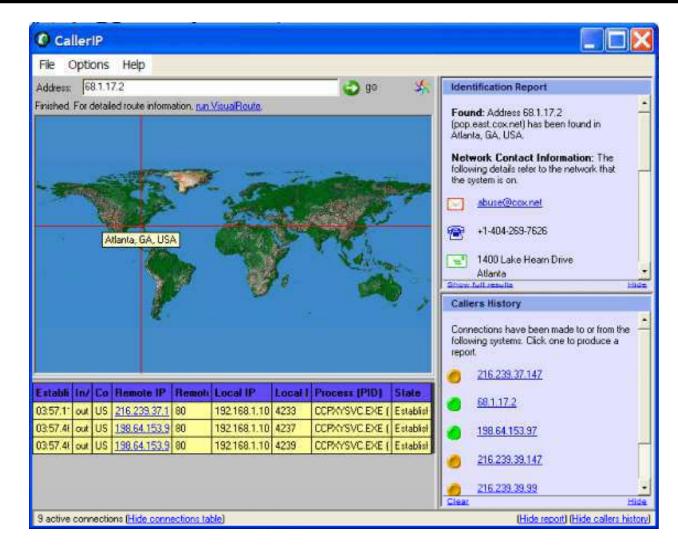


# CallerIP: Screenshot 1



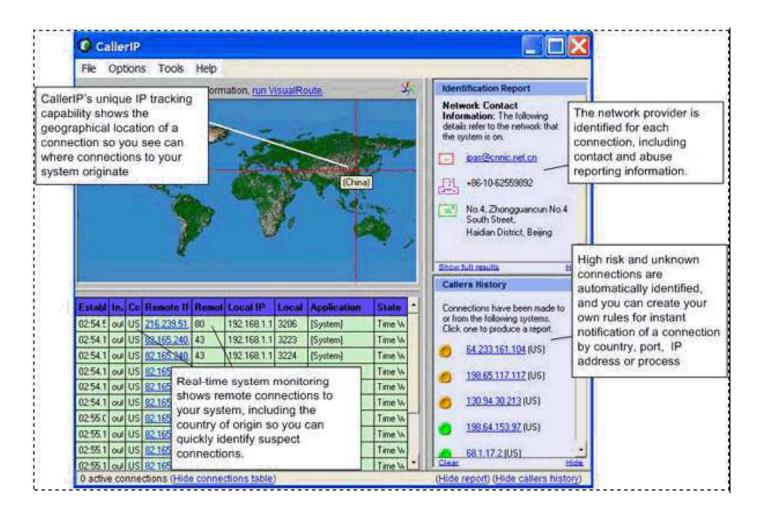


# CallerIP: Screenshot 2





### CallerIP: Screenshot 3





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# Web Data Extractor Tool

Use this tool to extract the targeted company's contact data (email, phone, fax) from the Internet

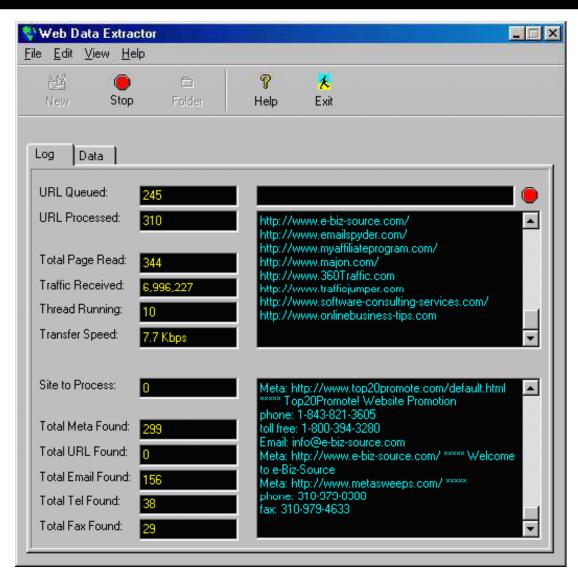
Extract url, meta tag (title, desc, keyword) for website promotion, search directory creation, web research



| <b>Web Data Extractor</b><br>File View Help   | <u>_   ×</u> |
|---|--------------|
| Image: Start Stop     Jobs     Image: Avg. speed     0.00 kbps       Edit     Open     Start     Stop     Image: Avg. speed     0.00 kbps |              |
| Session   Meta tags   Emails   Phones   Faxes   Merged list   Inactive sites  | 1            |
| Site(s) processed: 0 / 0 URL processed  | 0            |
| Traffic received  | 0 bytes      |
| URL Size  | State        |
|   |              |
|   |              |
|   |              |
|   |              |
|   |              |
|   |              |
|   |              |
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|   |              |

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### Web Data Extractor Tool: Screenshot



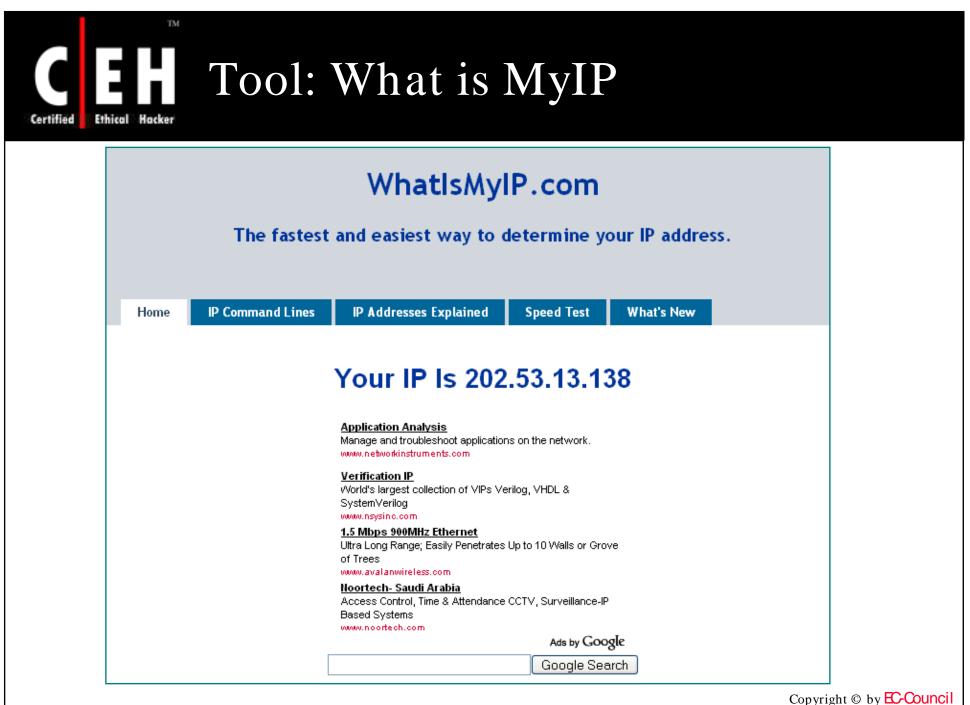
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#### Sam Spade.org www.samspade.org www.geektools.com This is a slightly trimmed down version of the SamSpade orp site, while I deal with some issues. · The SanSpade org FAQ · Lots of online tools www.whois.net Sam Spade for Windows · The Library · Link to SanSpade org. Get SamSpade.org stuff - T-shirts, mugs, mouse pada, boxer shorts, frisbees .... www.demon.net Who is the real Sam Spade? A character created by writer Dashell Hanmett. Need span filtering or antivens software? Try SpanResource.com Do Stuff ▼ Whois at Magic IP Whois Decipher http:// http:// Browse Unavailable Traceroute Author Search Locate USPIS Blackhole



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# DNS Information Extraction Tools

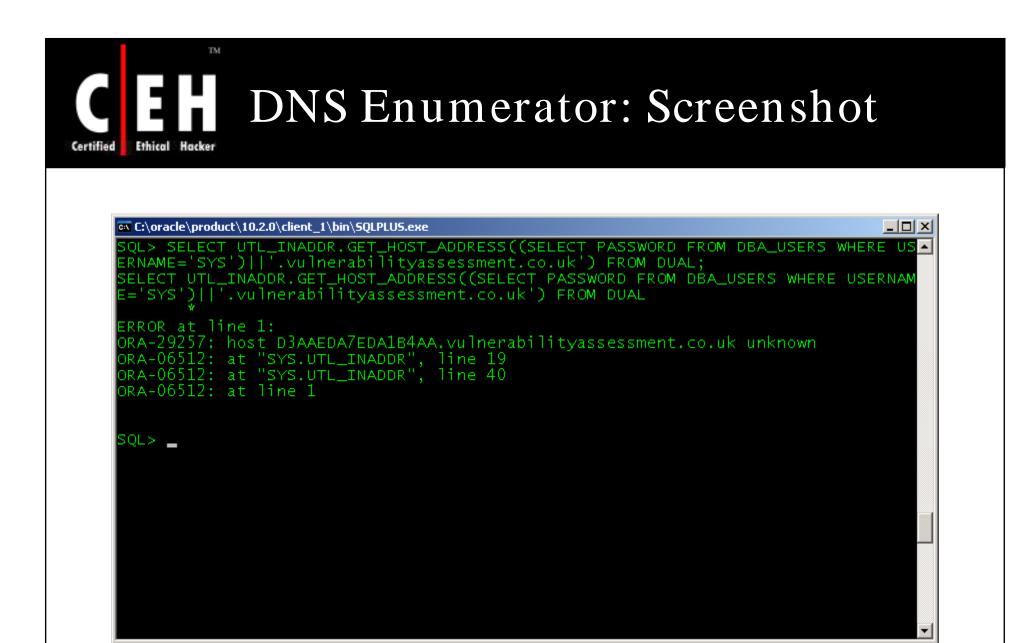
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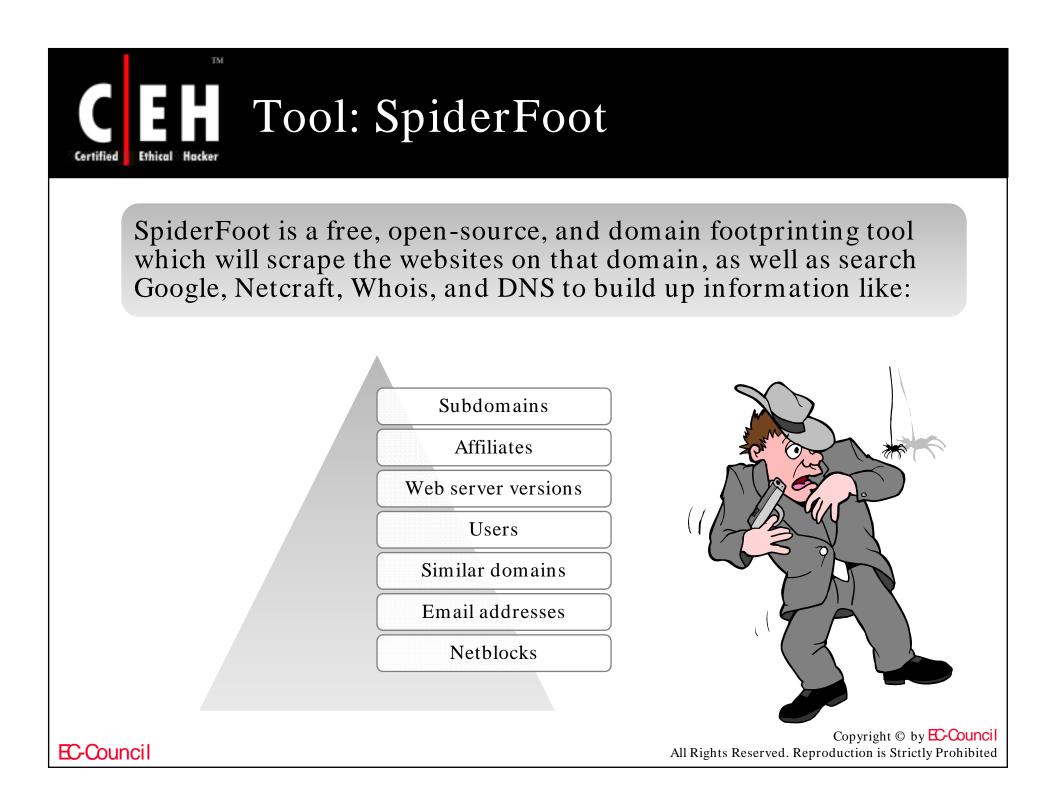


### DNS Enumerator is an automated sub-domain retrieval tool

### It scans Google to extract the results





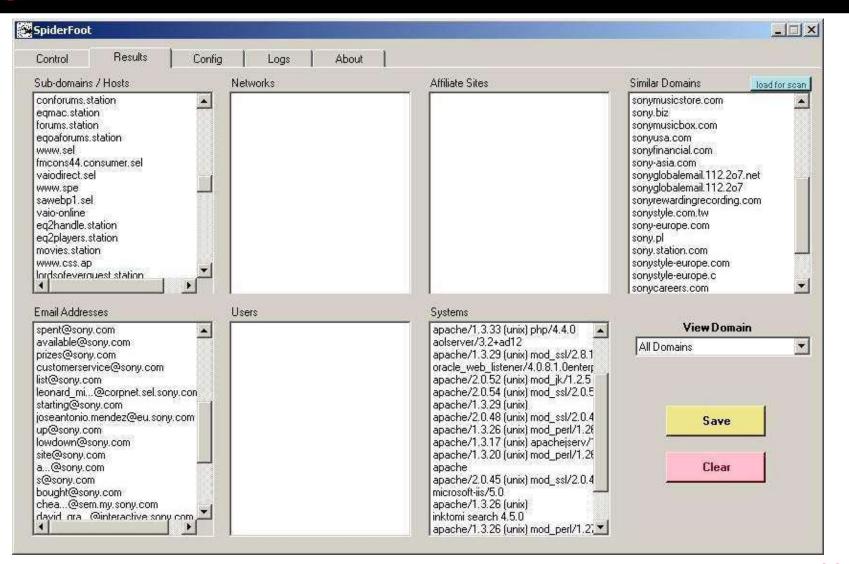




| Domain Nam   | es  | Discovery Methods              |   |  |
|--|---|--------------------------------|---|--|
|  | Add   | 🔽 Google Web                   | 🔽 Website Scraping                                  |  |
| I dell.com   |   |                                |   |  |
| ibm.com  | Del   |                                |   |  |
| toshiba.com<br>acer.com  |   | Google News                    | Vhois   |  |
| doorcoom.  |   |                                |   |  |
|  |   | DNS                            | ✓ Netcraft  |  |
|  |   |                                |   |  |
| 21 I I I I I I I I I I I I I I I I I I I   |   |                                |   |  |
| 2  |   |                                | ļ   |  |
|  |   | To                             | al Progress   |  |
| Page fetch results   | Load from file  |                                | Abort   |  |
| Page fetch results<br>Method   | URL   |                                | Abort<br>Result                                     |  |
| Page fetch results<br>Method<br>Google Web   | URL<br>http://www.dell.com.sg/  |                                | Abort<br>Result<br>OK                               |  |
| <sup>2</sup> age fetch results<br>Method<br>Google Web<br>Google Web                               | URL<br>http://www.dell.com.sg/<br>http://www.dell.com/64bit/  |                                | Abort<br>Result<br>OK<br>OK                         |  |
| Page fetch results<br>Method<br>Google Web<br>Google Web<br>Google Web                             | URL<br>http://www.dell.com.sg/<br>http://www.dell.com/64bit/<br>http://premier.dell.com/premier/  |                                | Abort<br>Result<br>OK<br>OK<br>OK                   |  |
| Page fetch results<br>Method<br>Google Web<br>Google Web<br>Google Web<br>Google Web               | URL<br>http://www.dell.com.sg/<br>http://www.dell.com/64bit/<br>http://premier.dell.com/premier/<br>http://www1.us.dell.com/content/default.aspx?c=u  | s&cs=k12home                   | Abort<br>Result<br>OK<br>OK                         |  |
| Page fetch results<br>Method<br>Google Web<br>Google Web<br>Google Web<br>Google Web<br>Google Web | URL<br>http://www.dell.com.sg/<br>http://www.dell.com/64bit/<br>http://premier.dell.com/premier/  | s&cs=k12home<br>x/corp/environ | Abort<br>Result<br>OK<br>OK<br>OK<br>OK<br>OK<br>OK |  |
|  | URL<br>http://www.dell.com.sg/<br>http://www.dell.com/64bit/<br>http://premier.dell.com/premier/<br>http://www1.us.dell.com/content/default.aspx?c=u<br>http://www1.us.dell.com/content/topics/global.asp | s&cs=k12home<br>s+with&host=.d | Abort<br>Result<br>OK<br>OK<br>OK<br>OK<br>OK       |  |

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# Certified Ethical Hacker SpiderFoot: Screenshot 2



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| Netcraft | Scraper DNS Google Whois                               |  |  |
|----------|--|--|--|
|          | Start scraping at<br>http://www.domain                 | Traverse Levels  |  |
|          | Max. Pages   | ms Between Pages   |  |
|          | ✓ Follow Sub-domains ✓ Xref Affiliates                 | <ul> <li>Use robots.bat</li> <li>Abuse robots.bat</li> </ul> |  |
|          | ☑ Follow Users (/~user)<br>Don't follow links matching | C Ignore robots.txt<br>egexp                                 |  |
|          | . <u>I</u>   |  |  |
|          |  |  |  |
|          |  |  |  |



Nslookup is a program to query Internet domain name servers. Displays information that can be used to diagnose Domain Name System (DNS) infrastructure

It helps find additional IP addresses if authoritative DNS is known from whois

MX record reveals the IP of the mail server

Both Unix and Windows come with a Nslookup client

Third party clients are also available - for example, Sam Spade

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#### 🗪 cmd.exe - nslookup

C:\WINDOWS>nslookup Default Server: zeus.pngcom.com Address: 206.62.8.10

> www.techrepublic.com Server: zeus.pngcom.com Address: 206.62.8.10

Non-authoritative answer: Name: c17-sha-redirect-lb.cnet.com Address: 216.239.113.101 Aliases: www.techrepublic.com

>

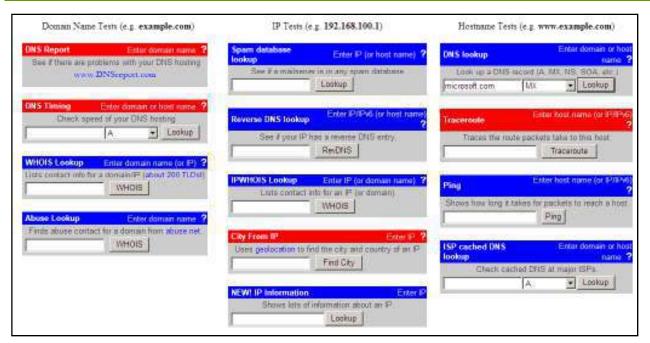


TM

### **Extract DNS Information**

Using <u>www.dnsstuff.com</u>, you can extract DNS information such as:

- Mail server extensions •
- IP addresses





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# **Certified Ethical Backer Extract DNS Information: Snapshot**

### **DNS Lookup: eccouncil.org MX record**

Generated by www.DNSstuff.com

How I am searching:

Searching for eccouncil.org MX record at e.root-servers.net [192.203.230.10]; Got referral to TLD1.ULTRADNS.NET. [took 101 m Searching for eccouncil.org MX record at TLD1.ULTRADNS.NET. [204.74.112.1]; Got referral to AUTH2.NS.NYI.NET. [took 44 ms] Searching for eccouncil.org MX record at AUTH2.NS.NYI.NET. [66.111.15.154]; Reports mail.eccouncil.org. [took 51 ms]

Answer:

| Domain             | Туре | Class | TTL  | Answer                               |
|--------------------|------|-------|------|--------------------------------------|
| eccouncil org      | MX   | IN    | 3600 | mail.eccouncil.org. [Preference = 5] |
| eccouncil org.     | NS   | IN    | 3600 | auth2.ns.nyi.net.                    |
| eccouncil.org.     | NS   | IN    | 3600 | auth l.ns.nyi.net.                   |
| mail eccouncil org | A    | IN    | 3600 | 66.111.15.34                         |

To see the DNS traversal, to make sure that all DNS servers are reporting the correct results, you can Click Here.

Note that these results are obtained in real-time, meaning that these are **not** cached results. These results are what DNS resolvers all over the world will see right now (unless they have cached information).

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# Types of DNS Records

| Α     | A host's IP address. An address record allowing a computer name to be<br>translated into an IP address. Each computer must have this record for its IP<br>address to be located. |
|-------|--|
| МХ    | Host's or domain's mail exchanger(s).  |
| NS    | Host's or domain's name server(s).   |
| CNAME | Host's canonical name allows additional names or aliases to be used to locate<br>a computer.   |
| SOA   | Indicates authority for the domain.  |
| SRV   | Service location record.   |
| RP    | Responsible person.  |
| PTR   | Host's domain name, host identified by its IP address.   |
| тхт   | Generic text record.   |
| HINFO | Host information record with CPU type and operating system   |



# Tool: Necrosoft Advanced DIG

### Necrosoft Advanced DIG (ADIG) is a TCP-based DNS client that supports most of the available options, including AXFR zone transfer



| 🐼 DNS lookup   |  |   |  |   |   |
|--|--|---|--|---|---|
| Target >   | www.eccouncil.org  | ļ   |  | TCP Jookup  | Winsock lookup  |
| Set root server  | 198.41.0.4   |   | MAILA : mail a   | gent RRs (Obso  | olete: use MX) 💌  |
| <ul> <li>Questions:<br/>www.eccount</li> <li>Authoritative n<br/>org<br/>org<br/>org<br/>org<br/>org<br/>org<br/>org<br/>org<br/>org<br/>org<br/>org<br/>org<br/>org<br/>Additional infor<br/>TLD1.ULTRA<br/>TLD2.ULTRA<br/>TLD3.ULTRA<br/>TLD3.ULTRA</li> </ul> | ame servers:<br>mation:<br>DNS.NET<br>DNS.NET<br>DNS.Org | Detailed errors<br>type: ANY (all<br>172800<br>172800<br>172800<br>172800<br>172800<br>172800<br>172800<br>172800<br>172800<br>172800<br>172800<br>172800 | MD : mail des<br>MF : mail forw<br>CNAME : the c<br>SOA : start of<br>MB : mailbox<br>MG : mail gro<br>MR : mail ren<br>NULL : null RF<br>WKS : well kr<br>PTR : domain<br>HINFO : host ir | ative name servi-<br>stination (Obsoliv<br>varder (Obsoliv<br>anonical name<br>a zone of author<br>domain name (<br>up member (EX<br>ame domain na<br>(EXP)<br>nown service de<br>name pointer<br>normation<br>ox or mail list info<br>change | ete: use MX)<br>e: use MX)<br>for an alias<br>ority<br>EXP)<br>EXP)<br>me (EXP)<br>escription |
| TLD5.ULTRA<br>TLD6.ULTRA   |  | 172800<br>172800  |  |   | MB, MG or MR)   |

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# Tool: Expired Domains

Expired Domains enable to search through a list of expiring domain names by keyword, domain, character length, and other criteria

The program can download an updated list of domain names with the click of a button

Multiple filter rules can be created to find domain names that are of interest

List can be printed, exported, and selected and domain can be saved in a draft list





| Elle Edit Skins Help Resources  |   |  |           |           |                                  |
|---|---|--|-----------|-----------|----------------------------------|
| apdate Domains Apply Rules Print Preview Print Check for updat  | etes Website Help                                   | ()<br>Resources * Exi  |           |           |                                  |
| Domains Contains Keyword  | 💠 Insert Rule                                       | 💻 Delete Rule  |           |           |                                  |
| v com anywhere v rot  | contains  | exclude  | no dashes | no digits | length                           |
| v org     Excludes Keyword       v info     vinfo       v biz     vinfo       v ca     Exclude dashes       v us     Exclude digits       v org.uk     Exclude digits   | download"   |  | Yes       | Yes       | <=15                             |
| Domain containe 12 char to matter   |   |  |           |           |                                  |
| Check All   |   |  |           |           | (                                |
| Check All   |   | J  |           |           |                                  |
| Check All   |   | )  |           |           | ^                                |
| Check All Deleting domains that match your rules Deleting domains full list Drafts  |   |  | ×         | Size      | ×                                |
| Domain contains 12 char no matter      Domain contains 12 char no matter      Domain contains 12 char no matter      Domain no matter      Domain contains 12 char no matter      Domater      Domain contains 1 |   |  | M         | Size      | v<br>10                          |
| Domain contains 12 char no matter      Domain contains 12 char no matter      Domain contains 12 char no matter      Domain name      Domain name      Domain name  | Extension   | ∎ 💌 Exp.Date   |           | Size      | _                                |
| Domain contains 12 char no matter      Domain domains full list     Drafts      Drag a column header here to group by that column      Domain name      gdownload      wernetdownload  | Extension<br>com                                    | Exp.Date   | ×         | Size      | 10                               |
| Domain contains 12 char no matter      Domain contai | Extension<br>com<br>com                             | Exp.Date<br>4/5/2007<br>4/5/2007   |           | Size      | 10<br>15                         |
| Domain contains 12 char no matter      Domain contains 12 char no matter      Domain contains 12 char no matter      Domain no matter      Deleting domains full list     Drafts      Drag a column header here to group by that column      Domain name  gdownload  wernetdownload  wornoadphi   | Extension<br>com<br>com                             | Exp.Date<br>4/5/2007<br>4/5/2007<br>4/5/2007                                     |           | Size      | 10<br>15<br>12                   |
| Domain contains 12 char no matter     Domain domains that match your rules     Deleting domains full list     Drafts     Drag a column header here to group by that column     Domain name     goownload     idownload     idownload     ownloadphil     ototvdownloads   | Extension<br>com<br>com<br>com<br>com               | Exp.Date<br>4/5/2007<br>4/5/2007<br>4/5/2007<br>4/5/2007                         |           | Size      | 10<br>15<br>12<br>12             |
| Check All     Domain contains 12 char no matter     Check All     Deleting domains full list Drafts     Drag a column header here to group by that column     Domain name     gdownload     wernetdownload     iddownload     ownloadphil     ototvdownloads     itvurgedownload  | Extension<br>com<br>com<br>com<br>com<br>com        | Exp.Date<br>4/5/2007<br>4/5/2007<br>4/5/2007<br>4/5/2007<br>4/5/2007<br>4/6/2007 |           | Size      | 10<br>15<br>12<br>12<br>15       |
| Check All  Celeting domains that match your rules  Deleting domains full list  Drafts  Drag a column header here to group by that column  | Extension<br>com<br>com<br>com<br>com<br>com<br>com | Exp.Date<br>4/5/2007<br>4/5/2007<br>4/5/2007<br>4/5/2007<br>4/6/2007<br>4/6/2007 |           | Size      | 10<br>15<br>12<br>12<br>15<br>15 |

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DomainKing is a domain name lookup tool that can help to find available domain names, including domains that are about to expire

It can import or extract domain names from a text file and generate them based on keywords

Extract domain names from search engine results, which enable to search for domain names that are expired but still indexed by search engines

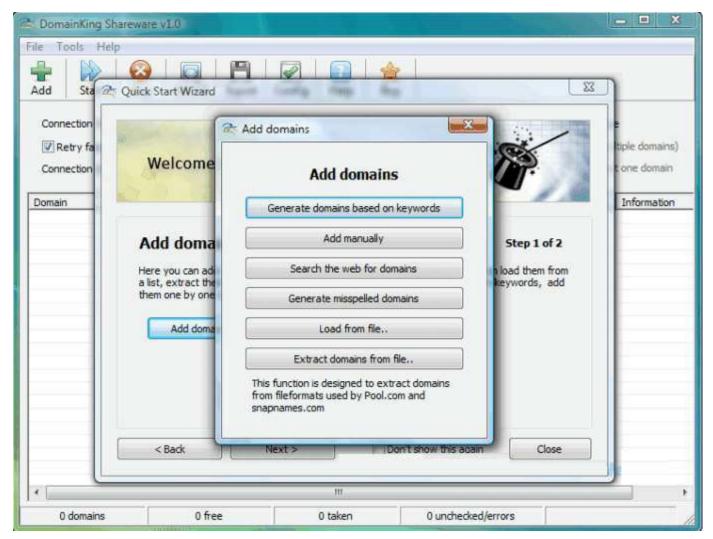


DomainKing allows to generate mistyped variations of a domain name

It supports more than 100 domain extensions and provides a fast lookup with color coded results and integrated WHOIS lookup



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Domain Name Analyzer is a domain name lookup tool that allows to research, find, register, and manage domain names for product or business

It includes options to generate multiple domain names from keywords and then checks them all for availability through a single click

The program is easy to use with a pleasant interface and online help

It supports all global and country code top level domains as well as trademark lookup, favorite registrar configuration, and payment status lookup

### Domain Name Analyzer: Screenshot

| D 🖨  | Start  | n a   | ₩ 🚣 🕅 🗱 🏹 🚺     | 👂 ? ? 🗟 🚾 🗔   |
|--|--|---|-----------------|---|
| SIIIo.   | Domain<br>files.CO   | M   | Status<br>Taken | Checked At 2/23/2003, 3:35:25 AM  |
| ▼ 2<br>▼ 3   | freefiles<br>goodfile  | s.COM   | Taken<br>Taken  | 2/23/2003, 3:35:25 AM<br>2/23/2003, 3:35:25 AM<br>2/23/2003, 3:35:25 AM   |
| ✓     4       ✓     5       ✓     6       ✓     7       ✓     8       ✓     9       ✓     10 | 4files<br>netfile<br>micro<br>deskf<br>busyf<br>filese<br>filesw | Delete Entry<br>Reset Entry<br>Copy<br>Check Availability<br>Stop Lookup<br>Trademark Lookup (IE)<br>NSI Payment Status (IE).<br>Browse website | ••              | 2/23/2003, 3:35:01 AM<br>2/23/2003, 3:35:25 AM<br>2/23/2003, 3:35:25 AM<br>2/23/2003, 3:35:27 AM<br>2/23/2003, 3:35:27 AM<br>2/23/2003, 3:35:27 AM<br>2/23/2003, 3:35:27 AM |
| Domain<br>with ma  | Server<br>names  | Version 1.3<br>in the .com ar<br>fferent compet:  |                 | an now be registere<br>to to http://www.int   |
| <  |  | EU  |                 | webattack.com   |

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### Tool: DomainInspect



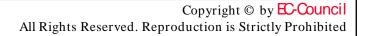
DomainInspect is a domain name tool that helps to find available domain names

Manually input domain names, and check if they are registered, or have the program generate a list of domain name combinations based on keyword schemes or keywords specified



Domain list can be imported to check them (multi-threaded), and optionally save, print, or export results to HTML, Excel, Text, XML, or comma-separated

Additional features include integrated trademark lookup, registration option, and more



## **CEH** DomainInspect: Screenshot

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| ) 🛩 🖬 🗞 🚑 🐰 🖻 💼 🕽                | 🔨 🕨 = 🦻 🖄 🛒 🔒          | )   Þ., H., |              |             |                   |
|----------------------------------|------------------------|-------------|--------------|-------------|-------------------|
| Senerator ×                      | Domain Name            | Status      | Availability | Expiry Date | Registrar         |
| ◪ 🕵 🖾   +₽ +₽   🖊   📽 🗌          | 🚱 webattack.com        | Checked     | Taken        | 11-17-2005  | REGISTER.COM, INC |
|                                  | 🚱 snfiles.com          | Checked     | Taken        | 05-07-2004  | GO DADDY SOFTWA   |
| Main keyword: files              | 🚱 test123.com          | Checked     | Taken        | 12-19-2004  | BULKREGISTER, LLC |
|                                  | 🚱 peppermintshrimp.com | Checked     | Taken        | 04-24-2004  | GO DADDY SOFTWA   |
| Website type: 🛛 Common 🛛 🔽       | 🚱 spychecker.com       | Checked     | Taken        | 10-04-2004  | REGISTER.COM, INC |
| Ded word at the basissing        | 🚯 myfeetsmellbad.com   | Checked     | Available    |             |                   |
| Pad word at the beginning        | 🚱 files.com            | Checked     | Taken        | 02-24-2006  | BLUEBERRY HILL CO |
| peppermintshrimp 🗧               |                        |             |              |             |                   |
| Pad word at the end              |                        |             |              |             |                   |
|                                  |                        |             |              |             |                   |
| 1st 🗧                            | <                      |             |              |             |                   |
| Pad either beginning or end word | ×                      |             |              |             |                   |

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### Tool: MSR Strider URL Tracer



MSR Strider URL Tracer enables to scan a domain name to see the third party domains that it serves content from and/or whether the site is being redirected

It also includes a feature that allows to generate a list of common typos based on the domain name

It scans and browses the list of generated names in order to spot domains that capitalize on inadvertent URL misspellings (typo-squatting)

It offers a detailed WHOIS lookup as well as an option to block sites, so they can no longer be accessed with Internet Explorer

Strider URL Tracer can also be very useful for webmasters or site owners who want to track down typo-squatting violations

### MSR Strider URL Tracer: Screenshot

| SR Strider URL Tracer                                 |   |                |
|---|---|----------------|
| File View Help  |   |                |
| Address snapfiles.com                                 |   | 💽 Scan Site    |
| Block Domain  |   | Generate Typos |
| E 🕒 🖻 🔍 💽 🗙 🔛 💕                                       | 🛃 🗉 🕨 💷 Scan Settings                               |                |
|   | Top Domains   |                |
| Red text indical                                      | es that the site or a third-party site used cookies |                |
| 🖃 casalemedia.com (Casale Media) - 14 reg             | irections   | _ ^            |
| ⊕ http://www.anapfiles.com                            | Copy URL  |                |
| http://www.sanapfiles.com                             | Who is casalemedia.com                              | •              |
| http://www.sapfiles.com                               | Block casalemedia.com                               |                |
| ⊕ http://www.sbapfiles.com                            |   |                |
| ⊕ http://www.smapfiles.com                            | Generate typos for casalemedia.com                  |                |
| http://www.snapdfiles.com                             | Add to current scan list                            |                |
| http://www.snapfies.com                               | · · · · ·   | _              |
| http://www.snapfilles.com                             | Expand Selection                                    |                |
|   | Expand All  |                |
| http://www.snapfies.com     http://www.snapfies.com   |   | _              |
| http://www.snapfiles.com     http://www.snapfiles.com | Go to NAI Member Ad Network Opt Out Site            |                |
| http://www.snapiles.com                               |   |                |
| http://www.snpafiles.com                              |   |                |
|   |   |                |
| 🖅 secureserver.net (Special Domain Servic             | es, Inc.) - 2 redirections                          |                |
| 💼 softwarredownload.net - 2 redirections              |   |                |
| 🖶 gsrch.com (New.net Incorporated) - 2 red            | irections   |                |
| www.snapfiles.com - 1 redirection                     |   |                |
| snpfiles.com - 1 redirection                          |   |                |
| snapfiles.net - 1 redirection                         |   |                |
| snapfiles.com - 1 redirection                         |   |                |
| ian googlesyndication.com (Google) - 1 redire         | ection  | ~              |
| Opening http://www.snapfiels.com                      |   |                |
| Please send feedback, bug reports, and sugg           | estions to tppatrol@microsoft.com                   |                |
|   |   |                |

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### Tool: Mozzle Domain Name Pro

Mozzle is an advanced domain name search tool that features flexible and customizable domain name creation patterns

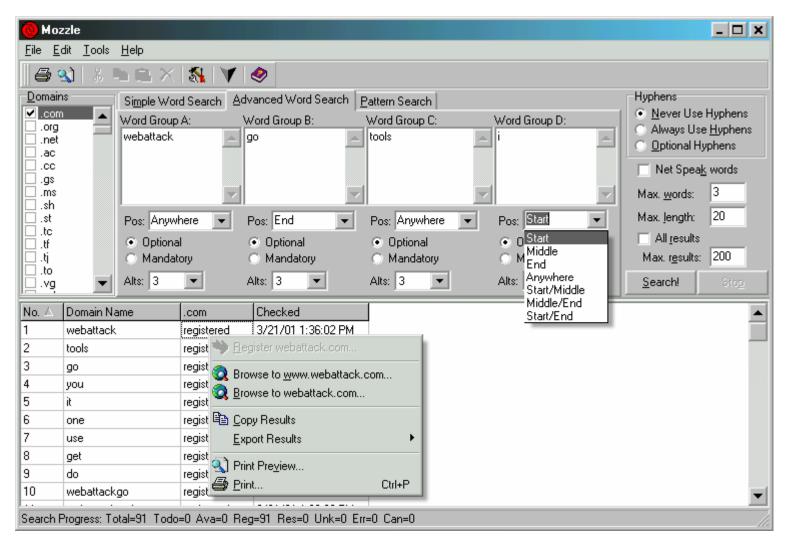
It also allows brainstorming using a built-in automatic thesaurus

Mozzle also includes Net Speak; a feature that generates alternative spellings to domain names, such as "4kids" for the domain name "forkids"

Mozzle offers 3 main search modes:

- Simple Search is the easiest to use
- Advanced Search allows to specifyindependent groups of alternative words with individual settings for the position of the words in domain name
- Pattern Search includes 5 wildcardcharacters and allows optional and alternate domain name parts to be specified

### Mozzle Domain Name Pro: Screenshot



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Domain Research Tool is an application that can be used on the initial enumeration of a target network

#### Functions of DRT:

- Finds domains
- Gathers search engine traffic information
- Enumerates backlinks
- Establishes page ranking statistics with a number of search engines

#### Features:

- BULK Scanning support
- Powerful Proxy Support
- IDN Support
- Typo Generator
- Portfolio Management support
- Watch List
- Type-in Domain Finder





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### Certified Ethical Hacker Domain Research Tool (DRT): Screenshots

DRT provides the expiry details for the target domain and that it indeed does resolve

| Domain Research Tool - a<br>File Edit Options Yiew |                     | 5-08-57.dpf - Lezon In | с.             |                     |                          |
|--|---------------------|------------------------|----------------|---------------------|--------------------------|
| 🗅 🖻 🖬 🍢 🗞 🎒  | አ 🖻 🛍 🕨 💻           | ି ୭ 📐 🤶 🖼 🚳            | i   🔅 🗇   💠 🗳  | 2                   | Domain Portfolio         |
| Domain Name  | Monitor Status      | Changes Summary        | Resolve Status | Registration Status | Registry Expiration Date |
| wirelessdefence.org                                | In Use              | No change.msn LP       | Resolves       | OK                  |                          |
| vulnerabilityassessment.co.uk                      | In Use              | No change.msn LP       | Resolves       | UNKNOWN FORMAT      | 2007-12-23               |
| logicallysecure.com                                | In Use              | No change.msn LP       | Resolves       | CLIENTTRANSFERP     | 2006-11-14               |
| blackhat.com                                       | In Use              | No change.msn LP       | Resolves       | CLIENTTRANSFERP     | 2010-5-30                |
| securityfocus.com                                  | In Use              | No change.msn LP       | Resolves       | OK                  | 2007-1-30                |
| microsoft.com                                      | In Use              | No change.msn LP       | Resolves       | ?                   | -                        |
| theregister.co.uk                                  | In Use              | No change.msn LP       | Resolves       | UNKNOWN FORMAT      | 2008-3-14                |
| •  |                     |                        |                |                     | F                        |
| My Scan List My Watch List                         | My Portfolio WB-1 V | VB-2 News Domain E     | xchange        |                     |                          |
| ompleted saving 7 domain recor                     | ds in 0.01 seconds. |                        |                | 0/0                 | 00:00:21 Ovt: US         |

#### DRT provides the Domain registration information, Name Server, and Contact Email Address

|   | F 🖬 🙎 🗞 🖉            | ) 🐰 🖻 🛍       | ▶ <b>≡ ⊅</b> | 📐 🤶 🚮 🎯       | i   🐎 🗇   4  | 🔶 🙎             | D     | omain Portfoli |
|---|----------------------|---------------|--------------|---------------|--------------|-----------------|-------|----------------|
|   | Registrar            | IP Address    | Name Servers | Last Updated  | Last Checked | Parking Sponsor | Notes | Contac         |
|   | ?                    | 213.171.218   | ?            | 2006-8-19     | 11/07/2006   | N/A             | ?     | matt.byrne@    |
|   | ?                    | 213.171.218   | ?            | 2006-2-19     | 11/07/2006   | N/A             | ?     |                |
| Т | TUCOWS INC.          | 82.23.21.209  | NS2.MYDYN    | 2006-9-05     | 11/07/2006   | ?               | ?     | steve_arms     |
|   | TUCOWS INC.          | 216.231.63.58 | DNS-2.DATA   | 2006-10-13    | 11/07/2006   | N/A             | ?     | dentrnoc@d     |
|   | TUCOWS INC.          | 205.206.231   | PDNS3.ULT    | 2006-10-12    | 11/07/2006   | N/A             | ?     |                |
|   | ?                    | 207.46.19.60  | -            |               | 11/07/2006   | N/A             | ?     |                |
|   | ?                    | 212.100.234   | ?            | 2006-3-15     | 11/07/2006   | N/A             | ?     |                |
|   |                      |               |              |               |              |                 |       | Þ              |
| ~ | an List My Watch Lis | <b>.</b>      | WB-1 WB-2 I  | News Domain E |              |                 |       |                |

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### Tool: Domain Status Reporter

Domain Name Status Reporter is a simple tool that allows you to monitor the status of the selected top level domains

> You can add interested Domain names into a list, and then check all of them (or individual ones) for availability



Supported domains include .com, .net, .org, .edu, .info, and .biz



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In addition to status, program displays expiration date and last updated date and created date

Settings allow to customize Whois server to be used, as well as domain extensions and keywords in Whois response that indicate that the domain name may be available

### Domain Status Reporter: Hacker Screenshot

| 🖳 Domai       | n Status R  | eporter [Softnik Tecl  | nologies]                         |            |            |           |
|---------------|-------------|------------------------|-----------------------------------|------------|------------|-----------|
| New<br>About. | Add (       |                        | Lookup All Rese<br>< Technologies |            | xport      |           |
| #             | Domain      |                        | Status                            | Created    | Expires    | Updated   |
| 1             | webat       | Copy All Entries       | CTIVE                             | 11/18/1997 | 11/17/2003 | 11/5/2001 |
| 2             | windo       | Copy Selected Entries  | EGISTRAR                          | 9/11/1995  | 9/10/2010  | 7/19/2002 |
| 3             | peppe       | Copy All Names         | CTIVE                             | 4/24/2000  | 4/24/2004  | 4/1/2003  |
| 4             | test12      | Delete Selected        | (CTIVE                            | 4/19/2002  | 4/19/2003  | 4/19/2002 |
|               | -           | Reset Selected         |                                   |            |            |           |
|               |             | Browse website         |                                   |            |            |           |
| <             |             | Ш.                     |                                   | )          |            | >         |
| Domains in    | whois queue | = 0 (0 lookups active) |                                   |            |            | 1         |

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Reggie is an easy to use and flexible domain name checker with a built in 80,000 word English dictionary

It uses both HTTP and Whois searches and works through firewalls and HTTP authorization

Reggie offers 5 automated search options including a Word List Builder which can build a list using a combination of 4 different words

It also supports "Sounds Like"using Soundex and Metaphone functions to find available domain names

Advanced users can also specify which servers to use for each domain extensions

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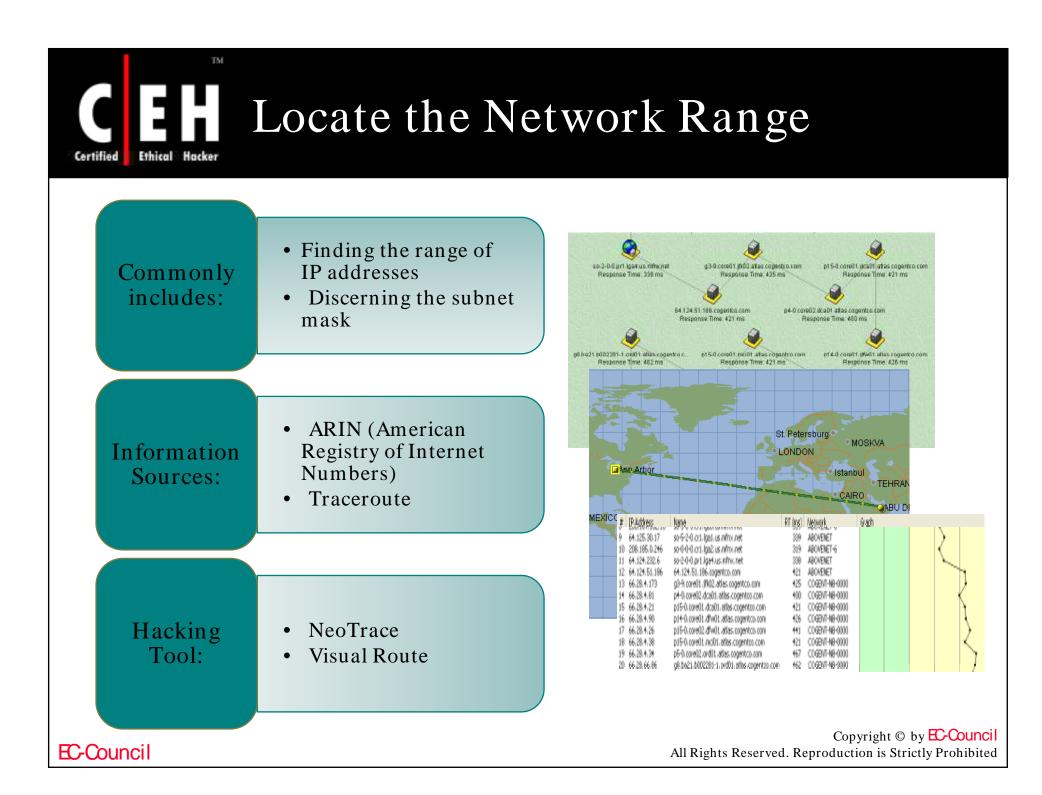


| 🖪 Reggie     |  | _ 🗆 🗙                         |
|--------------|--|-------------------------------|
|              | Single Search Automated Search   |                               |
|              | Search Options Search Results  | Start                         |
|              | Options  | Stop                          |
|              | Domains: (1) .com .net .org .edu Select others   |                               |
|              | ✓ Save Results in         C:\Program Files\Reggie\Reggie.txt   | Help                          |
| N N          | Dictionary   | Advanced                      |
| 00           |  | Register Domain               |
| N            | C Bange From AA to ZYMOTIC   |                               |
| 00           | ✓ Word length of between 1 ★ and 12 ★ letters  |                               |
|              | Use minus (-) instead of space   |                               |
| $\wedge$     | Word list builder  |                               |
|              | Enter up to four different words and Reggie will make a list containing all<br>possible combinations |                               |
| N            | 1 web 3 server   |                               |
|              | 2 host 4   | Visit                         |
| Reggie v2.00 | Try also using minus (-) between words   | www.mtoner.com<br>for updates |
|              | Numbers  |                               |



### Locating Network Range

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ARIN allows searches on the whois database to locate information on a network's autonomous system numbers (ASNs), network-related handles, and other related point of contact (POC)

ARIN whois allows querying the IP address to find information on the strategy used for subnet addressing



Applying the principles of stewardship, ARIN, a nonprofit corporation, allocates Internet Protocol resources; develops consensus-based policies; and facilitates the advancement of the Internet through information and educational outreach.



American Registry for Internet Numbers

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Wed, 16 Jan 2008 Call for Community Consultation -Software Repository

RSS 2.0

Tue, 15 Jan 2008 Join us in Los Angeles for ARIN XXII

Fri, 11 Jan 2008 ARIN Database Upgrade

Thu, 10 Jan 2008 ARIN AC Elects Chair for 2008

Wed, 09 Jan 2008 ARIN Elects Officers for 2008

Wed, 09 Jan 2008 Hotel Information for ARIN XXI in Deriver,

#### American Registry for Internet Numbers

#### Registration Services

 Request and manage number resources; Guidelines; Templates; Routing Registry

★ Templates

🫧 Guidelines

🤸 ARIN Service Region

#### 🕑 International Community

- Information about other RIRs, Internet community organizations; Number Resource Organization (NRO)

#### 🔮 Meetings

- Meeting and sponsorship information; ARIN, Board, and Advisory Council meeting minutes

★ ARIN XXI Meeting

#### Policies

- Policy proposals, manual, and archives
- Internet Resource Policy Evaluation Process
- Number Resource Policy Manual

#### Billing

- Service fee information and online payment forms
- 🫧 Fee Schedule
- Make Payment / Update Billing POC

#### Membership

 Membership information and benefits, listing of current members IPv6 Information Center
 Legacy RSA Information
 Network Abuse
 Contact Us
 Suggestions
 Mailing Lists
 Site Map

Search WHOIS

Need WHOIS help?



| Output from ARIN Whois   |  |             |  |
|--|--|-------------|--|
| ARIN Home Page ARIN Site Map AR  | RIN Whois Help <b>NEW!</b> Databa                      | se & Terr   | aplate Conversion Information Center                   |
| Search for : 5   | Submit Query   |             |  |
| Search results for: 207.46.230.21  | 18   |             |  |
| Microsoft ( <u>NETBLK-MICROSON</u><br>One Redmond Way<br>Redmond, WA 98052<br>US | FT-GLOBAL-NET)   |             | ARIN allows searches on the whois database to locate   |
| Netname: MICROSOFT-GLOB<br>Netblock: <u>207.46.0.0</u> -<br>Coordinator:         |  | IP A<br>dom | ddtoffoffious system                                   |
| Microsoft ( <u>ZM39-AR</u><br>425-936-4200                                       |  |             | numbers (ASNs), network-<br>related handles, and other |
| Domain System inverse r<br>DNS1.CP.MSFT.NET<br>DNS2.CP.MSFT.NET                  | mapping provided by:<br>207.46.138.20<br>207.46.138.21 |             | related point of contact (POC).                        |

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Traceroute works by exploiting a feature of the Internet Protocol called TTL or Time To Live

Traceroute reveals the path IP packets travel between two systems by sending out consecutive sets of UDP or ICMP packets with everincreasing TTLs

As each router processes an IP packet, it decrements the TTL. When the TTL reaches zero, that router sends back a "TTL exceeded" message (using ICMP) to the originator

Routers with reverse DNS entries may reveal the name of routers, network affiliation, and geographic location

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### Traceroute: Screenshot

Command Prompt

C:\>tracert mediacollege.com

Tracing route to mediacollege.com [66.246.3.197] over a maximum of 30 hops:

| 1  | <10 r | 1S   | <10 | ms | <10 | ms | 192.168.1.1   |     |
|--|-------|------|-----|----|-----|----|---|-----|
| 2  | 240 r | ns.  | 421 | ms | 70  | ms | 219-88-164-1.jetstream.xtra.co.nz [219.88.164.1]        |     |
| 3  | 20 r  |      |     | ms |     |    | 210.55.205.123  |     |
| 4  | *     |      | *   |    | *   |    | Request timed out.                                      |     |
| 23456789   | 30 г  |      | 30  | ms | 40  | ms | 202.50.245.197  |     |
| 6  | 30 p  | ns   | 40  | ms | 40  | ms | g2-0-3.tkbr3.global-gateway.net.nz [202.37.245.140]     |     |
| 7  | 30 r  | ns.  | 30  | ms | 40  | ms | so-1-2-1-0.akbr3.global-gateway.net.nz [202.50.116.161] |     |
| 8  | 160 r | ns   | 161 | ms | 160 | ms | p1-3.sjbr1.global-gateway.net.nz [202.50.116.178]       |     |
| 9  | 160 г | ns i | 171 | ms | 160 | ms | so-1-3-0-0.pabr3.global-gateway.net.nz [202.37.245.230] |     |
| 10   | 160 r | ns   | 161 | ms | 170 | ms | pao1-br1-g2-1-101.gnaps.net [198.32.176.165]            |     |
| 11   | 180 r | ns.  | 181 |    | 180 |    | lax1-br1-p2-1.gnaps.net [199.232.44.5]                  |     |
| 12   | 170 0 |      | 170 |    | 171 |    | lax1-br1-ge-0-1-0.gnaps.net [199.232.44.50]             |     |
| 13   | 240 r |      | 241 |    | 240 |    | nyc-m20-ge2-2-0.gnaps.net [199.232.44.21]               |     |
| 14   | 240 r |      | 251 |    | 250 |    | ash-m20-ge1-0-0.gnaps.net [199.232.131.36]              |     |
| 15<br>16   | 241 r |      | 240 |    | 250 |    | 0503.ge-0-0-0.gbr1.ash.nac.net [207.99.39.157]          |     |
| 16   | 251 r |      | 260 |    | 250 |    | 0.so-2-2-0.gbr2.nwr.nac.net [209.123.11.29]             |     |
| 17   | 250 r |      | 260 |    | 261 | ms | 0.so-0-3-0.gbr1.oct.nac.net [209.123.11.233]            |     |
| 18   | 250 r |      | 260 |    |     |    | 209.123.182.243   |     |
| 19   | 250 r | ns:  | 260 | ms | 261 | ms | sol.yourhost.co.nz [66.246.3.197]                       |     |
| Trace  | compl | lete |     |    |     |    |   |     |
| C:>>   |       |      |     |    |     |    |   |     |
|  |       |      |     |    |     |    |   | 200 |
|  |       |      |     |    |     |    |   | -   |
| 4  |       |      |     |    |     |    |   | 1   |
| and the second s |       |      |     |    |     |    |   |     |

- 0



Traceroute is a program that can be used to determine the path from source to destination

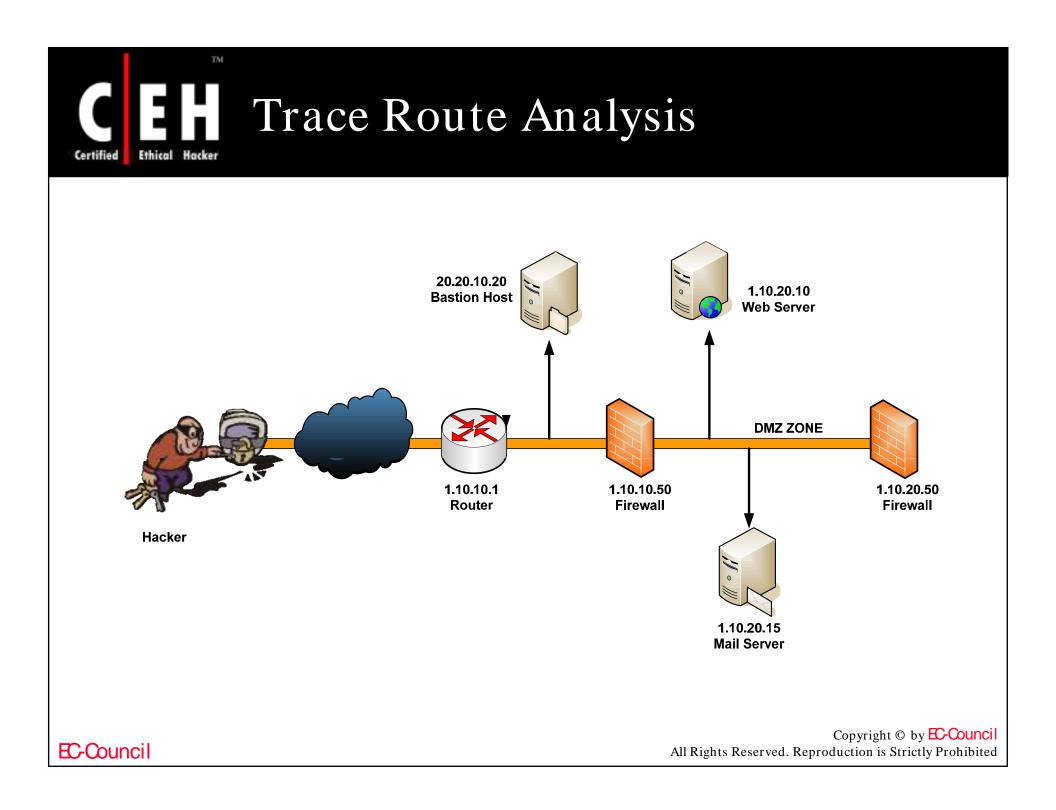
By using this information, an attacker determines the layout of a network and the location of each device

For example: after running several traceroutes, an attacker might obtain the following information:

- traceroute 1.10.10.20, second to last hop is 1.10.10.1
- traceroute 1.10.20.10, third to last hop is 1.10.101
- traceroute 1.10.20.10, second to last hop is 1.10.0.50
- traceroute 1.10.20.15, third to last hop is 1.10.101

- traceroute 1.10.20.15, second to last hop is 1.10.10.50

By putting this information together, you can diagram the network (see the next slide)

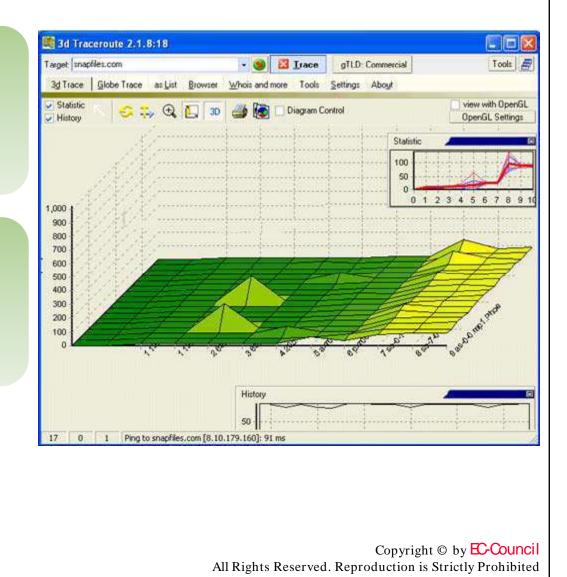




### Tool: 3D Traceroute

3D Traceroute is a full-blown three-dimensional traceroute program that allows you to visually monitor Internet's connectivity

It offers an attractive and fast loading 3D interface as well as optional text results



# CEH 3D Trac

TM

### 3D Traceroute: Screenshot 1

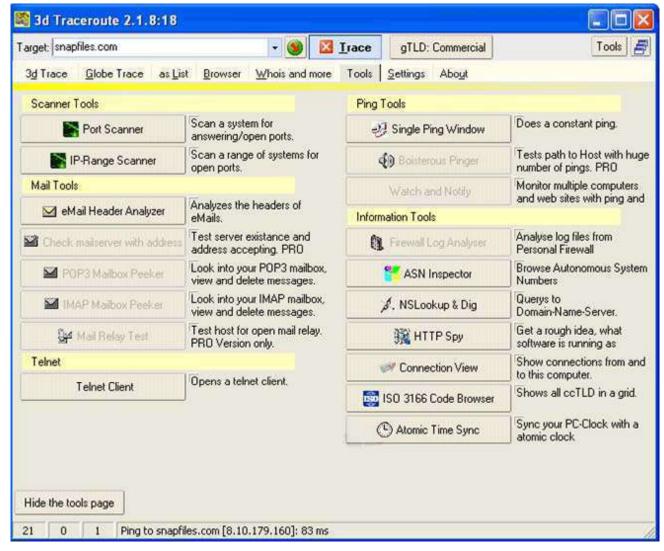
💐 3d Traceroute 2.1.8:18 F Target: snapfiles.com + (5 Irace gTLD: Commercial Tools 3d Trace Globe Trace as List Browser Whois and more Tools Settings About IP. Hostname last [ms] min [ms] max [ms] ava. [ms] var. [ms] total Loss perc. Loss Hop 192.168.1.1 192,168,1,1 1 0 0 2 65.14.252.8 65.14.252.8 9 11 0 1 3 9 1 0 65.14.255.229 65.14.255.229 12 184 0 205.152.145.201 205.152.145.201 10 35 4 3 Û 5 65.83.237.8 axr00mia-1-3-0.bellsouth.net 11 24 10 65 11 0 65.83.236.16 pxr00mia-0-0-0.bellsouth.net 6 7 65.57.174.5 so-0-1-0-0.gar1.Miami1.Level3.net 24 34 2 0 24 26 0 8 4.68.112.45 so-7-0-0.mp2.Miami1.Level3.net 151 31 9 64.159.3.213 as-0-0.mp1.Phoenix1.Level3.net 81 20 0 81 144 91 10 4.68.98.4 ge-6-1.hsa1.Phoenix1.Level3.net 82 81 90 86 4 0 83 7 11 8.10.179.160 snapfiles.com 83 118 89 0 ۰ above this level: not good any more 26 ms above this level; bad 125 ms Show Day And Night Trace V use: 34 0 1 Ping to snapfiles.com [8.10.179.160]: 83 ms

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TM

### 3D Traceroute: Screenshot 2



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### Tool: NeoTrace (Now McAfee Visual Trace)

| -   | no<br>en Rom   | ា្   | ace  |  |  | 216.239<br>Response T                                     | AB 193<br>me: 508 ms                                      | Q  | ima: 216 ma<br>pos5-1 cr02 a<br>Response<br>eningi dc2 cw       | shOf accident n<br>Time: 713 ma<br>net                  | tid4 170.2.117<br>Response Time: 154 ms<br>Attacement and<br>pos5-3.cr02.ash01.pc<br>Response Time: 5   |           |        |
|---|--|--|--|--|--|---|---|--|---|---|---|-----------|--------|
|   |  | 1910152  | NeoTrace sh<br>traceroute or<br>visually – m   | utpu<br>ap vi  | t<br>iew,  |   | usdr. exodus nef<br>me: 442 ms                            | www.goo<br>Response Ti<br>Response Ti                                | me 533 mg   | New York  | Casadilanca   | CABU DHAB |        |
|   |  |  | node view. a   | nd I   | Р  |   |   |  |   |   |   | A A       | Madras |
| #   | IP Address   | Name   | node view, a   | nd I   | Р  | ns)   | Max (ms)  | <b>#</b> S   |   | % Loss  | Network   | Graph     |        |
| #   | IP Address<br>217.165.236.73   | Name<br>SAM  | node view, a<br>view   | nd I   | Р  | ns)<br>O  | Max (ms)<br>0   | <b>#</b> 5<br>1  |   | SANTA IE DE BO  |   |           |        |
| #<br>1<br>2                               |  |  | · ·  | nd I<br>216  | P<br>216   |   |   | # 5<br>1<br>1  | # D   | % Loss  | Network   | Graph     |        |
| #<br>1<br>2<br>3                          | 217.165.236.73   | SAM  | · ·  |  |  | 0   | 0   | # 5<br>1<br>1  | <b>#</b> D  | <mark>% Loss</mark><br>0 %                              | Network   | Graph     |        |
| 1<br>2                                    | 217.165.236.73<br>213.42.12.11   | SAM  | · ·  | 216  | 216  | 0<br>216  | 0<br>216  | # 5<br>1<br>1<br>1<br>1  | #D<br>0<br>0  | <mark>% Loss</mark><br>0 %<br>0 %                       | Network<br><br>AE-EMIRNET-990929  | Graph     |        |
| 1<br>2<br>3                               | 217.165.236.73<br>213.42.12.11<br>213.42.12.130  | SAM<br>  | · ·  | 216<br>135   | 216<br>135   | 0<br>216<br>135   | 0<br>216<br>135   | # 5<br>1<br>1<br>1<br>1<br>1   | # D<br>0<br>0<br>0  | <mark>% Loss</mark><br>0 %<br>0 %<br>0 %                | Network<br><br>AE-EMIRNET-990929<br>AE-EMIRNET-990929   | Graph     |        |
| 1<br>2<br>3<br>4                          | 217.165.236.73<br>213.42.12.11<br>213.42.12.130<br>194.170.2.117   | SAM<br><br><br>dxb-e                                   | view   | 216<br>135<br>154                                    | 216<br>135<br>154                                    | 0<br>216<br>135<br>154                                    | 0<br>216<br>135<br>154                                    | # 5<br>1<br>1<br>1<br>1<br>1<br>1                                    | #D<br>0<br>0<br>0   | <mark>% Loss</mark><br>0%<br>0%<br>0%<br>0%             | Network<br><br>AE-EMIRNET-990929<br>AE-EMIRNET-990929<br>EMIRNET-EMIRNET  | Graph     |        |
| 1<br>2<br>3<br>4<br>5                     | 217.165.236.73<br>213.42.12.11<br>213.42.12.130<br>194.170.2.117<br>195.229.31.66  | SAM<br><br><br>dxb-e<br>dxb-e                          | view   | 216<br>135<br>154<br>159                             | 216<br>135<br>154<br>159                             | 0<br>216<br>135<br>154<br>159                             | 0<br>216<br>135<br>154<br>159                             | # 5<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1                          | #D<br>0<br>0<br>0<br>0  | % Loss<br>0 %<br>0 %<br>0 %<br>0 %<br>0 %               | Network<br>AE-EMIRNET-990929<br>AE-EMIRNET-990929<br>EMIRNET-EMIRNET<br>AE-EMIRNET-971125   | Graph     |        |
| 1<br>2<br>3<br>4<br>5                     | 217.165.236.73<br>213.42.12.11<br>213.42.12.130<br>194.170.2.117<br>195.229.31.66<br>195.229.0.234   | SAM<br><br><br>dxb-e<br>dxb-e<br>bcr2.t                | view<br>mix-rb.ge130.emix.ae<br>mix-ra.so100.emix.ae   | 216<br>135<br>154<br>159<br>139                      | 216<br>135<br>154<br>159<br>139                      | 0<br>216<br>135<br>154<br>159<br>139                      | 0<br>216<br>135<br>154<br>159<br>139                      | # 5<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1                | #D<br>0<br>0<br>0<br>0<br>0<br>0                                | % Loss<br>0%<br>0%<br>0%<br>0%<br>0%<br>0%              | Network<br>AE-EMIRNET-990929<br>AE-EMIRNET-990929<br>EMIRNET-EMIRNET<br>AE-EMIRNET-971125<br>EMIRNET-EMIRNET  | Graph     |        |
| 1<br>2<br>3<br>4<br>5<br>6<br>7           | 217.165.236.73<br>213.42.12.11<br>213.42.12.130<br>194.170.2.117<br>195.229.31.66<br>195.229.0.234<br>166.63.210.62                                  | SAM<br><br>dxb-e<br>dxb-e<br>bcr2.t<br>pos5-           | view<br>mix-rb.ge130.emix.ae<br>mix-ra.so100.emix.ae<br>hamesside.cw.net                             | 216<br>135<br>154<br>159<br>139<br>442               | 216<br>135<br>154<br>159<br>139<br>442               | 0<br>216<br>135<br>154<br>159<br>139<br>442               | 0<br>216<br>135<br>154<br>159<br>139<br>442               | # 5<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1           | # D<br>0<br>0<br>0<br>0<br>0<br>0<br>0                          | <mark>% Loss</mark><br>0%<br>0%<br>0%<br>0%<br>0%<br>0% | Network<br>AE-EMIRNET-990929<br>AE-EMIRNET-990929<br>EMIRNET-EMIRNET<br>AE-EMIRNET-971125<br>EMIRNET-EMIRNET<br>CW-NETCS2                           | Graph     |        |
| 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8      | 217.165.236.73<br>213.42.12.11<br>213.42.12.130<br>194.170.2.117<br>195.229.31.66<br>195.229.0.234<br>166.63.210.62<br>63.216.0.42                   | SAM<br><br>dxb-e<br>dxb-e<br>bcr2.t<br>pos5-           | view<br>mix-rb.ge130.emix.ae<br>mix-ra.so100.emix.ae<br>hamesside.cw.net<br>1.cr02.ash01.pccwbtn.net | 216<br>135<br>154<br>159<br>139<br>442<br>713        | 216<br>135<br>154<br>159<br>139<br>442<br>713        | 0<br>216<br>135<br>154<br>159<br>139<br>442<br>713        | 0<br>216<br>135<br>154<br>159<br>139<br>442<br>713        | # 5<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1      | # D<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0                | % Loss<br>0 %<br>0 %<br>0 %<br>0 %<br>0 %<br>0 %        | Network<br>AE-EMIRNET-990929<br>AE-EMIRNET-990929<br>EMIRNET-EMIRNET<br>AE-EMIRNET-971125<br>EMIRNET-EMIRNET<br>CW-NETCS2<br>CAIS-CIDR7             | Graph     |        |
| 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9 | 217.165.236.73<br>213.42.12.11<br>213.42.12.130<br>194.170.2.117<br>195.229.31.66<br>195.229.0.234<br>166.63.210.62<br>63.216.0.42<br>206.24.238.166 | SAM<br><br>dxb-e<br>dxb-e<br>bcr2.t<br>pos5-<br>bhr1-p | view<br>mix-rb.ge130.emix.ae<br>mix-ra.so100.emix.ae<br>hamesside.cw.net<br>1.cr02.ash01.pccwbtn.net | 216<br>135<br>154<br>159<br>139<br>442<br>713<br>446 | 216<br>135<br>154<br>159<br>139<br>442<br>713<br>446 | 0<br>216<br>135<br>154<br>159<br>139<br>442<br>713<br>446 | 0<br>216<br>135<br>154<br>159<br>139<br>442<br>713<br>446 | # 5<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | # D<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | % Loss<br>0%<br>0%<br>0%<br>0%<br>0%<br>0%<br>0%<br>0%  | Network<br>AE-EMIRNET-990929<br>AE-EMIRNET-990929<br>EMIRNET-EMIRNET<br>AE-EMIRNET-971125<br>EMIRNET-EMIRNET<br>CW-NETCS2<br>CAIS-CIDR7<br>CW-05BLK | Graph     |        |

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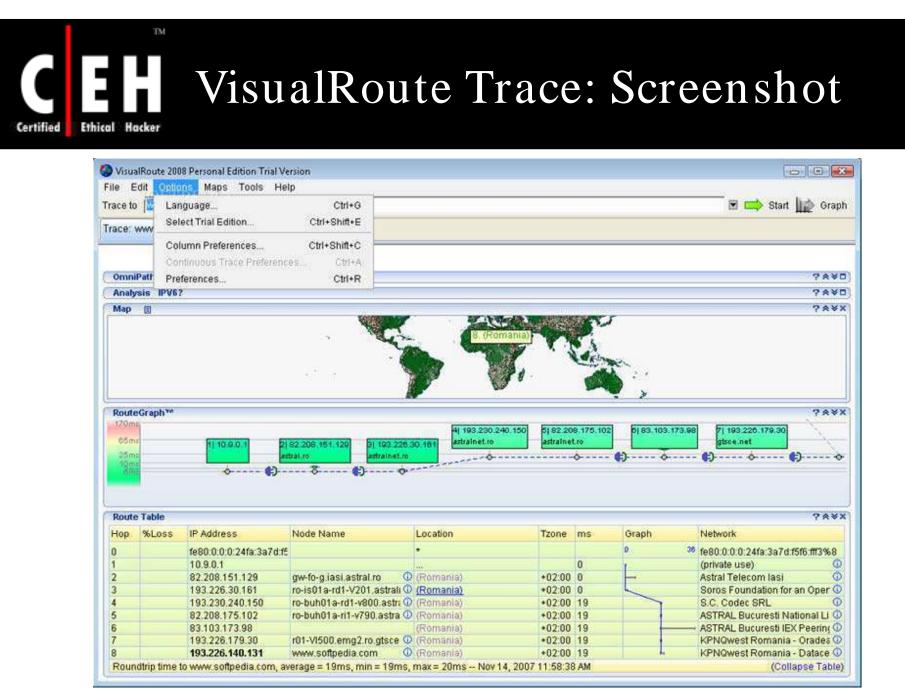
### Tool: VisualRoute Trace

VisualRoute 2008 Personal Edition Trial Version - 0 X File Edit Options Maps Tools Help Trace to www.sofpedia.com 🖻 📫 Start 📗 Graph Trace: www.softpe... 7.8¥0 OmniPath\*\* Analysis IPV6? 7.8¥0 7.8¥X Map III 7\*¥X RouteGraph<sup>\*\*\*</sup> 11 103 230 240 150 61 82 208 175 102 6183.103.173.98 71 103 226 470 30 651 attrainet.co strainet ro tros net 1933 2:36 30 Tr 82 268 151 12 dral.ic traination. ---o---- ()---- 8---- ()---- o---7 AVX **Route Table** IP Address Node Name Network Hop %Loss Location Tzone ms Graph fe80.0.0.0.24fa:3a7d.fE 0 36 fe80.0:0.0.24fa 3a7d f5f6 fff3%8 0 109.01 0 (private use) 0 11 2 82.208.151.129 gw-fo-g iasi astral ro (Romania) +02:00 0 Astral Telecom lasi 0 3 193.226.30.161 ro-is01a-rd1-V201.astrali () (Romania) +02:00 0 Soros Foundation for an Oper 🛈 ro-buh01a-rd1-v800.astri () (Romania) 4 193.230.240.150 +02:00 19 S.C. Codec SRL ro-buh01a-ri1-v790 astra (Comania) 5 82.208.175.102 +02:00 19 ASTRAL Bucuresti National LI 🛈 83.103.173.98 +02:00 19 ASTRAL Bucuresti IEX Peerine 6 (Romania) 193 226 179 30 r01-VI500.emg2.ro.gtsce () (Romania) +02:00 19 KPNQwest Romania - Orades ① 7 8 193.226.140.131 www.softpedia.com (Romania) +02:00 19 KPNQwest Romania - Datace O Roundtrip time to www.softpedia.com, average = 19ms, min = 19ms, max = 20ms - Nov 14, 2007 11:58:38 AM (Collapse Table)

It shows the connection path and the places where bottlenecks occur

www.visualware.com/download/





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Path Analyzer Pro delivers advanced network route tracing

It traces with performance tests, DNS, whois, and network resolution to investigate network issues

It is integrated with all these powerful features in a simple and single graphical interface



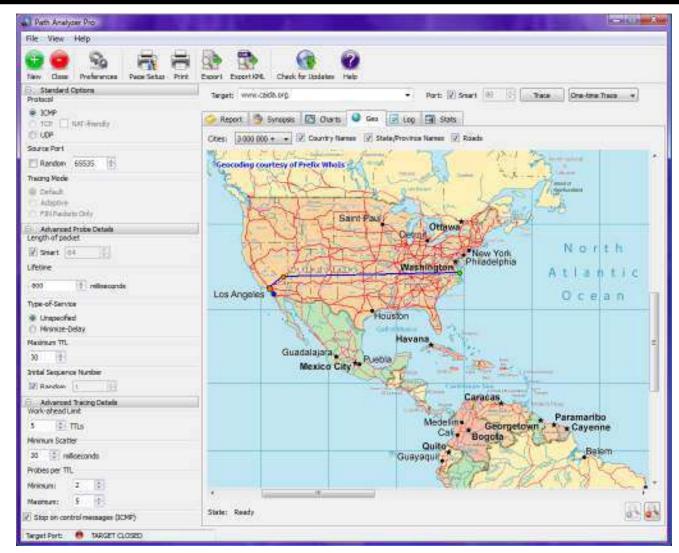
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| Tite Diese (Help   | NUMBER OF STREET   |   |   |              |         |                   |              |  |  |  |  |  |
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| IB Oensit  |  |   |   | 1            |         |                   |              |  |  |  |  |  |
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| <ul> <li>Fashaads Dila</li> </ul>  |  |   |   | 1            |         |                   | 1            |  |  |  |  |  |
| Advanced Probe Details<br>Length of pediat   |  |   | X   | 1            |         |                   | 1            |  |  |  |  |  |
| V Snart + E  |  |   |   | 1            | 1111    |                   |              |  |  |  |  |  |
| Lifetme  |  |   |   | 6            |         |                   |              |  |  |  |  |  |
| and the second s |  | T   | /*  |              |         |                   | -            |  |  |  |  |  |
| a00 C milliseconds   | P  | 1 2 0   |   |              |         |                   | 1            |  |  |  |  |  |
| Type-of-Service  |  |   |   |              |         |                   | 1            |  |  |  |  |  |
| Unspecified  | 8  |   |   |              |         |                   | 1            |  |  |  |  |  |
| C Meterice-Delay   |  |   |   |              |         |                   |              |  |  |  |  |  |
| Maximum TTL  | Hap 3P Address   | Notian  | ASR Network Name  | % Lore       | Letency | Ang Latency       | Stal Dev     |  |  |  |  |  |
| 30 0-  | 1 10.17.17.1   | local-travial   |   | 0.00         | 1       | 0.95              | 0.17         |  |  |  |  |  |
| Contraction of the second s  | 3 10.1.40.1  | 10.1.40.1   | Variable Variable and Advance 1   | 0.00         | 1       | 0.28              | 0,44         |  |  |  |  |  |
| Wital Sequence Number  | 3 68, 10, 14, 205<br>4 172, 22, 48, 210  | 68.10.14,205  | 22773 HEROC-68-10-0-0   | 0.00         | 1       | 9.31              | 1,80         |  |  |  |  |  |
| W Random 1   | 5 172, 22, 40, 129   | 172.22.46.129   |   | 0,00         | i.      | 7.68              | d.35         |  |  |  |  |  |
|  | 6 66, 10, 14, 17   | refederj02-ge703.rd.hv.cox.   |   | 0,00         | 1       | 0.60              | 0.24         |  |  |  |  |  |
| Advanced Tracing Details   | 7 68.L0.218<br>8 209.85.130.12   | adhibblarj02-eo 130.r 2.au. ctx .<br>200.85, 130, 12  | 12773 NETELK-ATROC-68-1-0-0<br>15369 GOOGLE   | 0.00         | 1.0     | 14.70             | 2.05         |  |  |  |  |  |
| Advanced Tracing Details<br>Work-sheed Limit   | 9 06,249,95,126  | 209.85.130.12<br>66.249.95.125  | 15109 GOOGE   | 0.00         | 1       | 34.01             | 0.23         |  |  |  |  |  |
| Work-sheed Limit   |  |   | 15169 GOOGLE  | 0.00         |         | 1 38.37           | 0.29         |  |  |  |  |  |
| Work-ehead Limit   | H 30 66.249,95.120   | 66.249.95.120   | CONTRACTOR OF A |              |         |                   |              |  |  |  |  |  |
| Work-ahead Link<br>1 E Tha<br>Minimum Scatter  | H 10 66.249.95.120<br>66.249.95.120  | 66.249,95.120   | 15359 GOOGLE  |              |         |                   |              |  |  |  |  |  |
| Work-ehead Limit   | 10 66.249.95.120<br>66.249.95.120<br>209.65.249.221  | 66.249.95.120<br>209.85.248.221   | 15369 GOOGLE  | 0.00         |         | 141.05            | 1.65         |  |  |  |  |  |
| Work-afread Linit<br>5 (2) TTLs<br>Minimum Scatter<br>20 (2) williseconds  | <ul> <li>⇒ 10 66,246,95,120</li> <li>66,246,95,120</li> <li>209,85,246,251</li> <li>⇒ 11 72,14,232,53</li> <li>72,14,232,53</li> </ul>   | 66, 246, 95, 120<br>209, 85, 248, 221<br>72, 14, 232, 53<br>72, 14, 232, 53                                       | 15369 GOOGLE<br>15369 GOOGLE<br>15369 GOOGLE  | 0.00         |         | 141.05            | 1,65         |  |  |  |  |  |
| 5 E TTLs<br>Minimum Scatter<br>33 E villiseconds<br>Photes per TTL   | <ul> <li>□ 0 56.249.95.120</li> <li>66.249.95.120</li> <li>209.55.249.95.120</li> <li>209.55.249.221</li> <li>□ 11 72.14.232.53</li> <li>72.14.232.53</li> <li>72.14.232.74</li> </ul> | 66.246.05.120<br>206.65.246.221<br>72.14.232.53<br>72.14.232.53<br>72.14.232.74                                   | 15399 GOOGLE<br>15399 GOOGLE<br>15399 GOOGLE<br>15399 GOOGLE  |              |         |                   |              |  |  |  |  |  |
| Work-affect Linit<br>5 E TTLs<br>Minimum Scatter<br>20 E williseconds<br>Probes per TTL<br>Minimum 2 E   | H 10 56.249.95.120<br>20.99.95.120<br>20.95.549.221<br>H 11 72.14.222.53<br>72.14.222.53<br>72.14.222.70   | 56, 246, 78, 120<br>209, 85, 248, 221<br>72, 14, 232, 53<br>72, 14, 232, 53<br>72, 14, 232, 74<br>72, 14, 232, 74 | 15399 GOOGLE<br>15399 GOOGLE<br>15399 GOOGLE<br>15399 GOOGLE<br>15399 GOOGLE                                    | 0.00<br>00.0 |         | 141.05<br>  39.32 | 1.43<br>0.79 |  |  |  |  |  |
| Work-shead Linit<br>5 E TTLs<br>Minimum Scatter<br>20 E initiseconds<br>Probes per TTL   | <ul> <li>□ 30 56 246 55 120<br/>66 246 95 120<br/>200 85 248 95 120<br/>170 85 248 221<br/>□ 172 14 232 53<br/>72 14 232 53<br/>72 14 232 74<br/>□ 12 72 14 232 70</li> </ul>          | 66.246.05.120<br>206.65.246.221<br>72.14.232.53<br>72.14.232.53<br>72.14.232.74                                   | 15399 GOOGLE<br>15399 GOOGLE<br>15399 GOOGLE<br>15399 GOOGLE  |              |         |                   |              |  |  |  |  |  |

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Maltego can be used for the information gathering phase of penetration testing making it possible for less experienced testers to work faster and more accurately

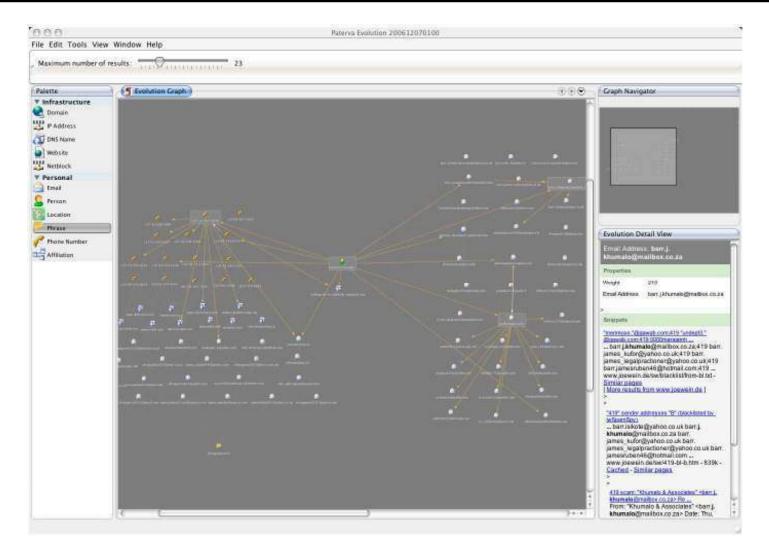
Maltego provides you with a graphical interface that makes seeing these relationships instant and accurate - making it possible to see hidden connections

Maltego has applications in:

- Forensic investigations
- Law enforcement
- Intelligence operations
- Identity fraud investigation
- Identity verification processes







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LFT is a sort of 'traceroute' that often works much faster and goes through many configurations of packet-filters

> LFT implements other features such as AS number lookups through several reliable sources, loose source routing, netblock name lookups, and many more

> > It is the all-in-one traceroute tool because it can launch a variety of different probes using ICMP, UDP, and TCP protocols, or the RFC1393 trace method



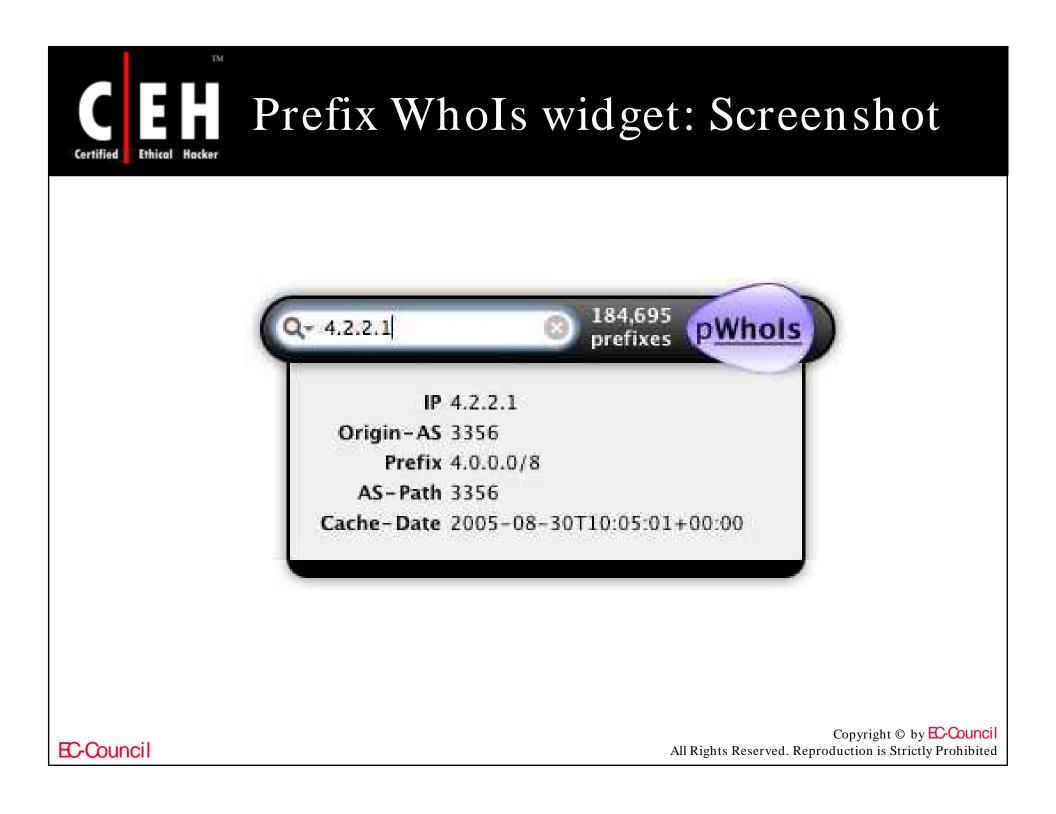
Prefix WhoIs widget displays the number of prefixes present within the global Internet routing table and allows the user to submit queries using a familiar Dashboard interface

It allows the user to submit queries in the form of IP addresses

The IP addresses are submitted to the Prefix WhoIs project, an organization that tracks and models the global internet routing table

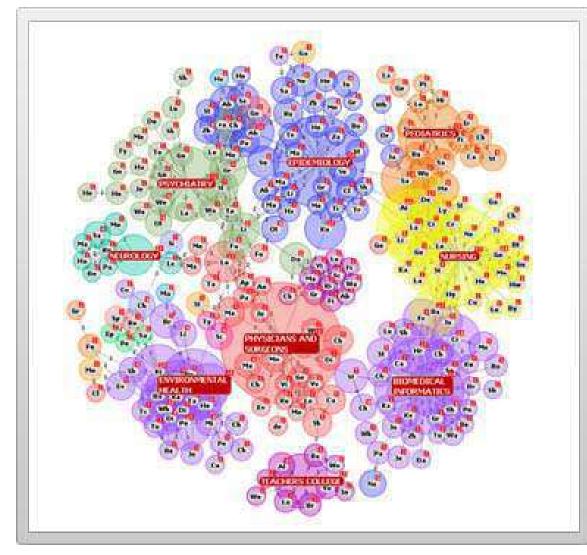
It also displays some useful information, such as the size of the overall table measured in a number of prefixes

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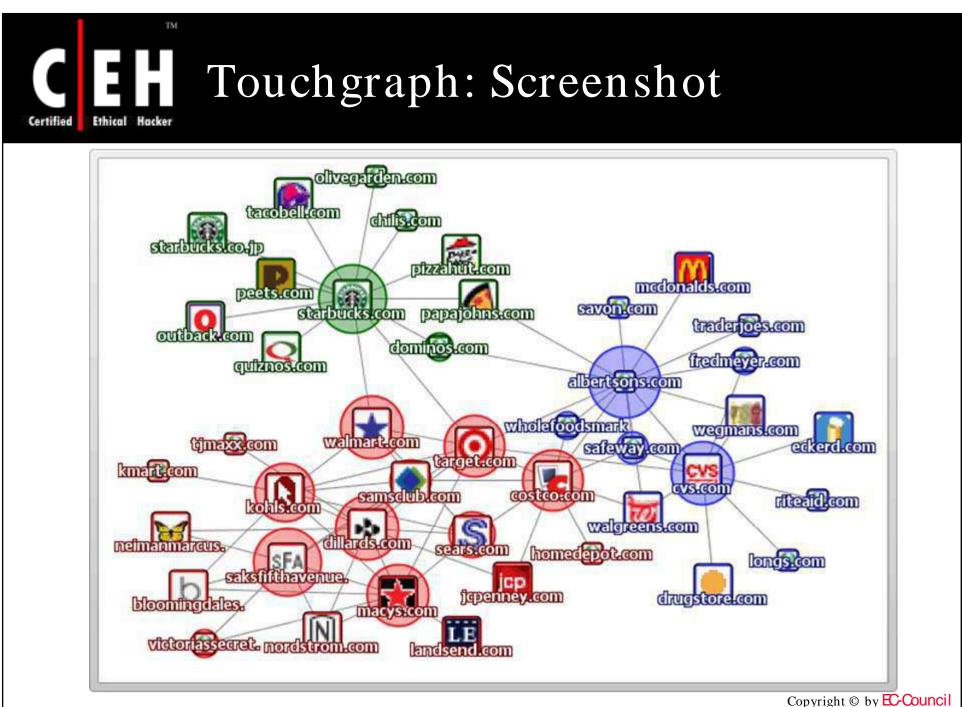


### Tool: Touchgraph www.touchgraph.com



TouchGraph allows for the creation and navigation of ineractive graphs. Ideal for orginising links, or mind mapping

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### Tool: VisualRoute Mail Tracker



| Нор | %Loss | IP Address      | Node Name                      | Location               | Tzone  | ms   | Graph Network 🖹 🗕              |
|-----|-------|-----------------|--------------------------------|------------------------|--------|------|--------------------------------|
| 0   |       | 217.165.221.153 | SAM                            | *                      |        |      | 0 4514 Emirates Internet       |
| 1   |       | 213.42.12.6     | -                              | (United Arab Emirates) |        | 2537 | Emirates Telecommunicati       |
| 2   |       | 213.42.12.131   | -                              | (United Arab Emirates) |        | 2513 | Emirates Telecommunicati       |
| 3   |       | 194.170.2.117   | -                              | (United Arab Emirates) |        | 2467 | Emirates Internet              |
| 4   |       | 195.229.31.35   | auh-emix-rb.ge6303.er          | (United Arab Emirates) |        | 2429 | Emirates Telecommunicati       |
| 5   |       | 195.229.31.34   | auh-emix-ra.ge6303.er          | (United Arab Emirates) |        | 2421 | Emirates Telecommunicati       |
| 6   |       | 62.216.144.25   | -                              | (United Kingdom)       | *      | 2766 | FLAG Telecom Limited           |
| 7   |       | 62.216.140.9    | ge-1-0-0.0.core1.sfr1.fl:      | (United Kingdom)       | *      | 2894 | FLAG Telecom Limited           |
| 8   |       | 166.90.133.165  | gige4-1-116.ipcolo2.Sa         | San Francisco, CA, US/ | -08:00 | 2655 | Level 3 Communications, Ir     |
| 9   |       | 209.244.14.201  |                                | San Francisco, CA, US/ |        |      | Level 3 Communications, Ir     |
| 10  |       | 209.247.10.233  | so-4-0-0.mp2.SanFran           | San Francisco, CA, US/ | -08:00 | 3008 | Level 3 Communications, Ir     |
| 11  |       | 64.159.0.218    | so-2-0-0.mp2.SanJose           |                        | -08:00 |      | Level 3 Communications, Ir     |
| 12  |       | 64.159.2.165    | gigabitethernet5-2.core        |                        | -08:00 |      | Level 3 Communications, Ir     |
| 13  |       | 209.244.3.246   | GigabitEthernet5-0.edg         | Palo Alto, CA, USA     | -08:00 | 2996 | Level 3 Communications, Ir     |
| 14  |       | 209.245.146.150 | Singtel-Level3-oc3.ix.si       |                        |        | 2962 | Lt sh arris the number of here |
| 15  |       | 203.208.182.21  | -                              | Singapore              | +08:0( | 2974 | - It shows the number of hops  |
| 16  |       | 203.208.172.29  | p6-8.sngtp-cr2.ix.singte       | Singapore              | +08:0( |      | made and the respective IP     |
| 17  |       | 202.160.250.154 | -                              | Singapore              | +08:0( |      |                                |
| 18  |       | 165.21.12.78    | FE-4-0-0.lavender.sing         |                        | +08:0( |      | addresses, the node name,      |
| 19  | 20    | 165.21.48.102   | -                              | Singapore              | +08:0( |      |                                |
| 20  | 30    | 137.132.19.100  | olympus.bic.nus.edu.s;         |                        | +08:0( |      | location, time zone, and       |
| 21  | 30    | 137.132.19.100  | olympus.bic.nus.edu.s;         |                        | +08:0( |      | network                        |
| 22  |       | 137.132.19.100  | olympus.bic.nus.edu.s;         |                        | +08:0( |      |                                |
| 23  |       | 137.132.19.100  | olympus.bic.nus.edu.s <u>.</u> | (Singapore)            | +08:0( | 3159 |                                |



# Tool: eMailTrackerPro



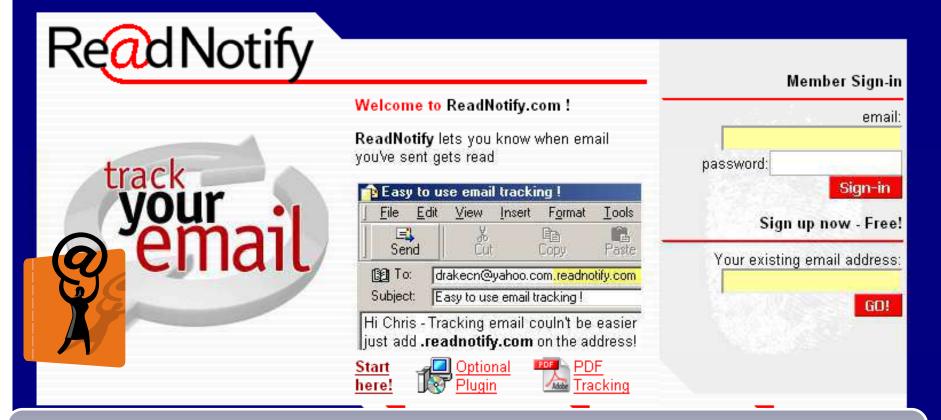
🔗 eMailTrackerPro \_ 🗆 🔀 File Options Help Start here My Inbox My Trace Reports webmaster@softpedia.com Analysis: Trace completed, click here for advanced route analysis Email Address: webmaster@softpedia.com You are on day 1 of your 15-day trial of eMailTrackerPro. Click here to apply a licence or for purchase information click here Network Contact Information: The following details refer to the network responsible for the computer that originated the email Мар noc@qtstelecom.ro E +40 21 410 3883 =" GTS Telecom Romania **Bucharest Financial Plazza** Calea Victoriei 15, intrarea A, etajul 2 704111 Bucuresti Romania Domain Contact Information: The following details refer to the registered contact details for the domain Romania Whois Privacy Protection Service, Inc. Whois Agent (fcdwptssst@whoisprivacyprotect.com) =" +1.4252740657 Fax: +1 4256960234 eMailTrackerPro is the email analysis tool that enables analysis of an email and its headers automatically, and provides graphical results **Route to Sender** 

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## Tool: Read Notify www.readnotify.com





Mail Tracking is a tracking service that allows you to track when your mail was read, for how long and how many times, and the place from where the mail has been posted. It also records forwards and passing of sensitive information (MS Office format)



# E-mail Spiders

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Have you ever wondered how Spammers generate a huge mailing database?

They pick tons of e-mail addresses by searching in the Internet

All they need is a web spidering tool picking up e-mail addresses and storing them to a database

If these tools run the entire night, they can capture hundreds of thousands of e-mail addresses

### Tools:

- Web data Extractor
- <sup>¶t</sup> E-mail Address Spider





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# Tool: 1<sup>st</sup> E-mail Address Spider

| File Search                 | Help             |                           |                                   |   |        |
|-----------------------------|------------------|---------------------------|-----------------------------------|---|--------|
| ▶ I                         | I I              | Reset Search Save Res     | y 💰                               | IS Homepage Buy now   | 6      |
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| ]iiabnj@iiabr               |                  | insurance agents mail - ( |                                   | http://www.google.com/search?q=insurance+agents+mail  |        |
| ↓]info@insura               | ancenewsnet.c    | MSN Search: insurance     | agents mail                       | http://search.msn.com/results.asp?RS=CHECKED&FORM=MSNH&v=1&q=insuran                            | ice+a. |
| 5]gsavelli@a                |                  | Insurance Agents Web      |                                   | http://www.insurance-web-sales.com/   |        |
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Power E-mail Collector is a powerful email address harvesting program

It can collect up to 750,000 unique valid email addresses per hour with a Cable/DSL connection

It only collects valid email addresses

You do not have to worry about ending up with undeliverable addresses

How does it work?

• Just enter a domain that you want to collect email addresses from and press the start button. The program opens up many simultaneous connections to the domain and begins collecting addresses



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# Power E-mail Collector Tool: Screenshot

| 10   | lower En     | all collector 32 | 2                   |                     |             | 008                           |
|------|--------------|------------------|---------------------|---------------------|-------------|-------------------------------|
| Elle | Iools S      | Settings Help    |                     |                     |             |                               |
| 2 5  | xt Save      | Start Stop       | Resat Settings Help | Co<br>Home          |             |                               |
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|      | 4            | Connecting       | d.mx.mail.yahoo.com | ckt@rocketmail.com  | 18          | bmy@rocketmail.com            |
|      | 5            | Connecting       | f.mx.mail.yahoo.com | cm@rocketmail.com   | 73          | bmz@rocketmail.com            |
|      | 6            | Connecting       | e.mx.mail.yahoo.com | cm)@rocketmail.com  | 90          | bna@vocketmail.com            |
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|      | 9            | Connecting       | a.mx.mail.yahoo.com |                     | 30          | bne@rocketmail.com            |
|      | 10           | Connecting       | b.mx.mail.yahoo.com | cow@rockstmail.com  | 64          | bnd@rocketmail.com            |
| ÷.   | 11           | Connected        | c.mx.mail.yahoo.com | czg@rocketmail.com  | 80          | bnf@rocketmail.com            |
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|      | 16           | Connected        | h.mx.mail.yahoo.com | czh@rocketmail.com  | 57          | bni@vocketmail.com            |
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TM

Hacker

Ethical

Certified

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# Locating Network Activity

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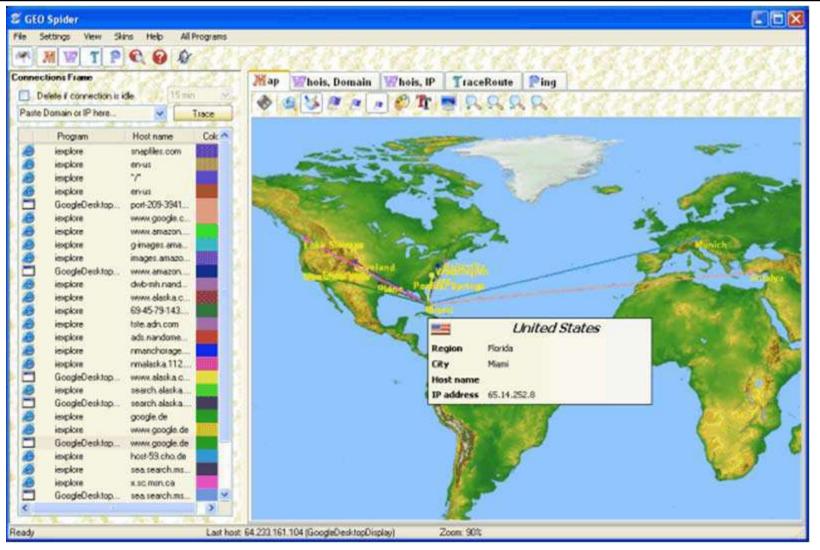
GEO Spider helps you to detect, identify, and monit your network activity on the world map

You can see website's IP address location on the Earth

GEO Spider can trace a hacker, investigate a website, and trace a domain name

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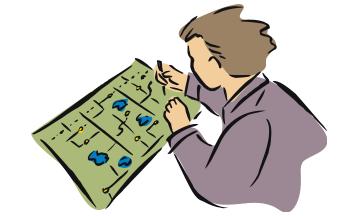
Geowhere handles many popular newsgroups to find answers to your queries in an easy and fast manner

Geowhere can also seek information from country specific search engines for better results

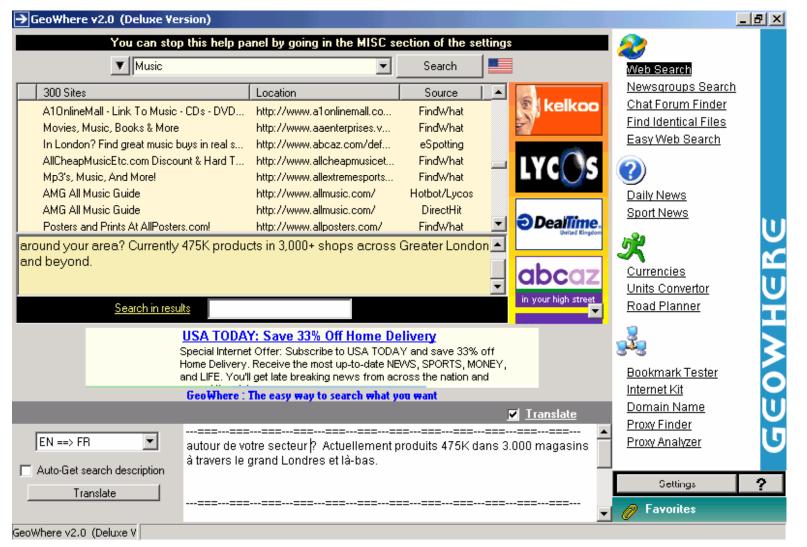
Use Geowhere to footprint an organization's:

- Newsgroups Search
- Mailing list finder
- Easy Web Search
- Daily News











Google Earth puts a planet's worth of imagery and other geographic information right on your desktop

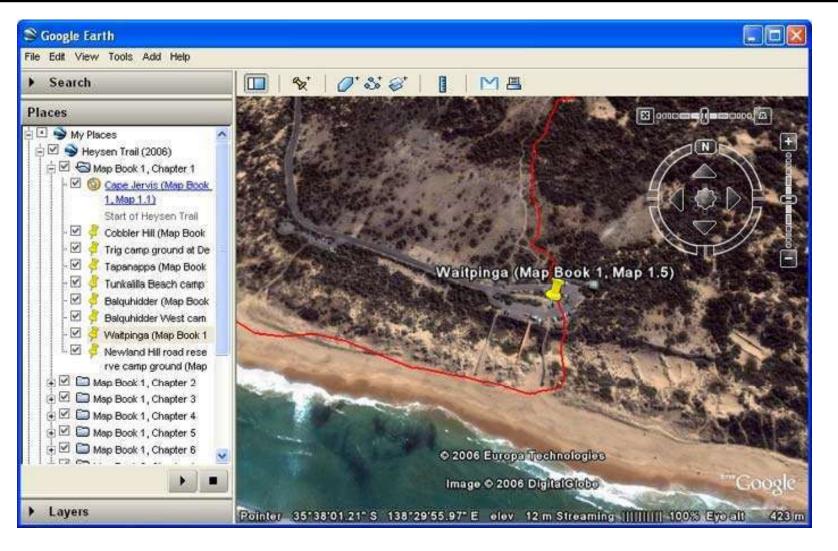
You can footprint the location of a place using GoogleEarth

### Valuable tool for Hackers

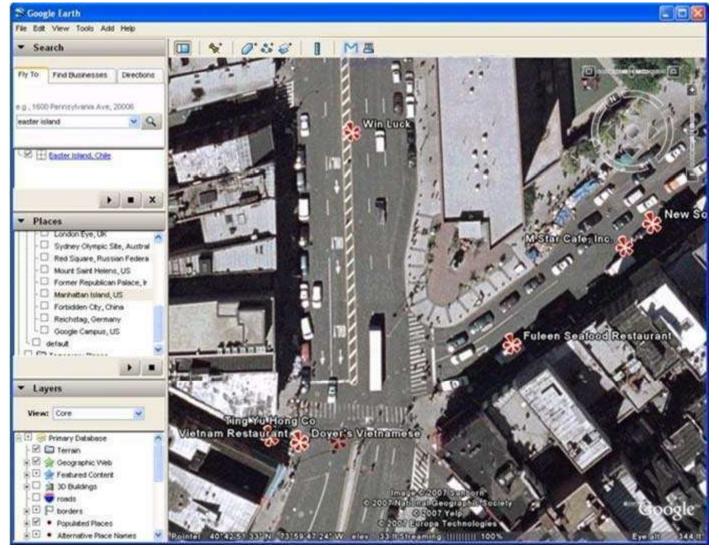












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# Search Engines

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# Dogpile (Meta Search Engine)

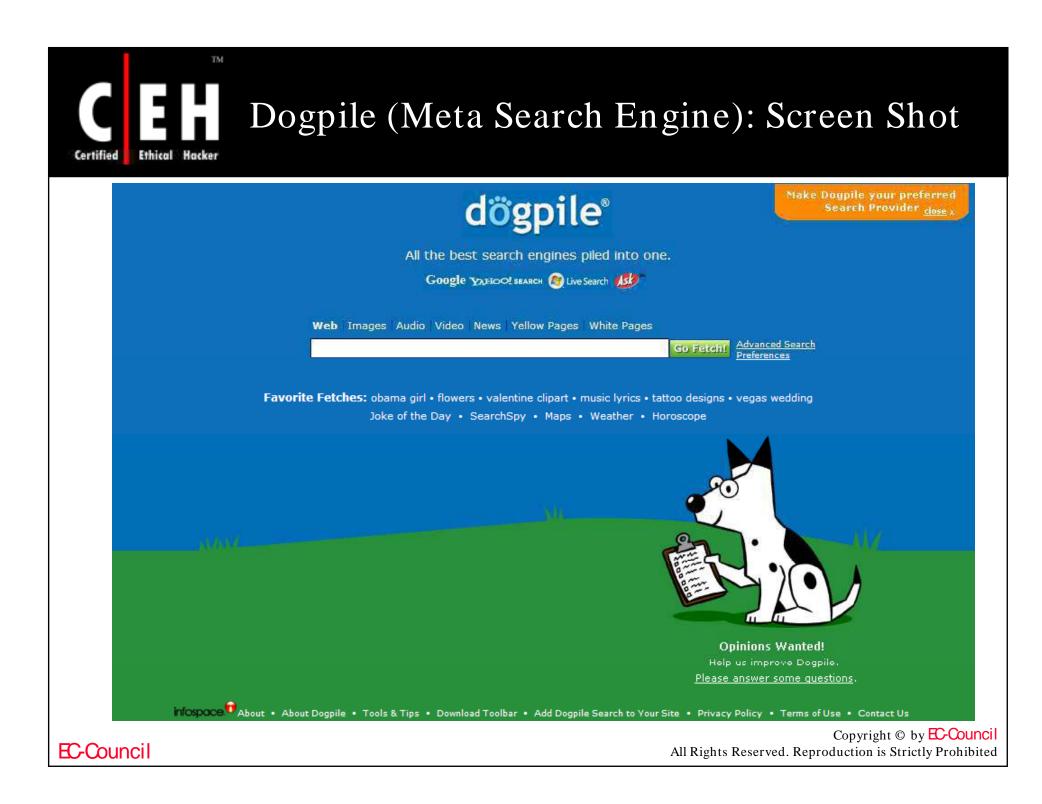
Dogpile is a meta search engine; it gets results from multiple search engines and directories and then combines them and presents to the user



Dogpile page provides code to add search tool to your website

It chases down the best results from Internet's top search engines, including Google, Yahoo! Search, MSN, Ask Jeeves, About, MIVA, LookSmart and others





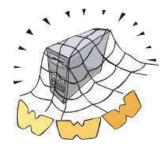


WebFerret searches the web quickly and thoroughly by instantly submitting the search query to multiple search engines

All results are displayed in a single concise window

| Download iPod Software - ipod software .     CD to MP3 Ripping Service     About     Apple iPod     Apple - iPod + iTunes     IPods at Circuit City | <ul> <li>Download IPod Software - Download a</li> <li>When an iPod comes along - you must</li> <li>Official site of the MP3 player with vide</li> <li>Official site of the MP3 player with vide</li> </ul> | http://download-ipod-software.com/<br>http://www.ripitgood.com<br>http://tools.search.yahoo.com/shortc  | ±96<br>±78               | Entireweb<br>Google ad                          |   |
|---|--|---|--------------------------|---|---|
| @ About<br>@ Apple iPod<br>@ Apple - iPod + iTunes  | Official site of the MP3 player with vide  | 4 (\$15.0) (5.5.1) (94 (5.5) (5.5.2) (5.5)  |                          | Google ad                                       |   |
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| Apple - iPad + iTunes   | Official site of the MP3 player with vide  |   | ±78                      | Yahoo!  |   |
|   |  | http://www.apple.com/ipod/ipod.html   | ±81                      | AltaVista                                       | 1 |
| IPods at Circuit City   | Learn about iPod, Apple TV, and access   | http://www.apple.com/itunes/  | :81                      | AOL   |   |
|   | - www.circuitcity.com Find Great Prices  | http://0.r.msn.com/?ld=2vI5ZiLkAIN  | ±0                       | MSN   |   |
| Smart iPod Ideas  | Offers iPod utilities and accessories.   | http://www.smart-ipod-ideas.com   | ±81                      | Search.com                                      |   |
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| Free Apple Ipod   | Get a Free 60 GB Apple Ipod. Receive ne  | http://producttestalliance.com  | ±81                      | Google ad                                       |   |
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| Discount iPod MP3 Player and Music Dev.   | . Discount Apple iPod, dicount iPod nan  | http://mp3ipodstore.com/  | ±84                      | Entireweb                                       |   |
| Apple iPod - Apple Official Store   | Choose and personalize your iPod at th   | http://na.link.decdna.net/n/27981/27  | ±81                      | Yahoo!  |   |
| Apple iPod - Apple Official Store   | Choose and personalize your iPod at th   | http://na.link.decdna.net/n/27981/27  | =81                      | AltaVista                                       |   |
| Apple iPod - Apple Official Store   | Choose and personalize your iPod at th   | http://store.apple.com/1-800-MY-AP  | ±81                      | Lycos   |   |
| 🗷 Apple - iPod  | Read about the features and check out  | http://www.apple.com/ipod/  | ±78                      | MSN   |   |
| iPod-accessories.co.uk  | Featuring a selection of iPod accessorie   | http://www.ipod-accessories.co.uk   | ±81                      | Search.com                                      |   |
| Data recovery software hard disk usb driv.  | Data recovery software unerase files ph  | http://www.datarecoveryipod.com/  | ±81                      | Entireweb                                       |   |
| everythingiPod.com  | Shop everythingiPod for accessories inc  | http://www.everythingipod.com/  | ±78                      | Yahoo!  |   |
| 🐻 iPod Hack a Day   | Pictures and descriptions of hacks and   | http://ipod.hackaday.com/   | ±78                      | Search.com                                      |   |
| Acole iPod Succort  | Visit Apple's iPod service and support p   | http://www.apple.com/support/ipod   | ::84                     | Yahoo!  | - |
| IPod-accessories.co.uk     Jota recovery software hard disk usb driv.     everythingiPod.com     iPod Hack a Day                                    | Featuring a selection of iPod accessorie<br>Data recovery software unerase files ph<br>Shop everythingiPod for accessories inc<br>Pictures and descriptions of hacks and                                   | http://www.ipod-accessories.co.uk<br>http://www.datarecoveryipod.com/<br>http://www.everythingipod.com/<br>http://ipod.hackaday.com/<br>http://www.apple.com/support/ipod | ±81<br>±81<br>±78<br>±78 | Search.com<br>Entireweb<br>Yahoo!<br>Search.com |   |



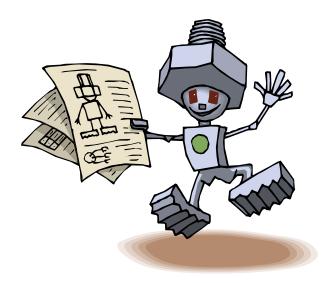




This page located at the root folder holds a list of directories and other resources on a site that the owner does not want to be indexed by search engines

All search engines comply to *robots.txt* 

You might not want private data and sensitive areas of a site, such as script and binary locations indexed



<u>Robots.txt file</u>
 User-agent: \*
 Disallow: /cgi-bin
 Disallow: /cgi-perl
 Disallow: /cgi-store

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# robots.txt: Screenshot

| 1            | Spider List                               |  |         |  |            | Help |
|--------------|---|--|---------|--|------------|------|
| Log Analyzes | Spider Name (User Agent)                  | 1  | 1.1     | Coursey  | Language   | 100  |
|              | DREGAIS (Gelder)                          |  |         | USA .  | English    |      |
| 74           | DR part (part)<br>DR Gerkolot (peckol     | de Spider                                  | -       | State of the local division of the local div |            |      |
| Spider List  | D the Gerbox (Serba                       | Spider Name                                |         |  |            |      |
| Care.        | GeBol(gebol)                              | Google                                     |         |  |            |      |
| (T)          | 🔲 🖗 Grader (Sigabor)                      | User-Agent                                 |         |  | 114        |      |
| Disation     | - BR Golen (golen)                        | Googlebol                                  |         |  |            |      |
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|              | Hibel (Hubeler)                           |  |         |  | 1.4.1      |      |
|              | DR allet con Paulsi                       | Spider Info URL<br>http://www.googlebst.cv |         |  | (a)        |      |
|              | DR BM_Planetwide [1                       | http://www.googeoorco                      | <u></u> |  | <u>a</u>   |      |
|              | □ 1 litovalois (ITroval                   |  |         |  | _          | _    |
|              | mage kapsi net (ku                        | E Holo                                     |         | 80   | 2 Carcel   |      |
|              | Contrast Contral (Do                      | en Text Site Davier)                       | 11      | Canada   | English    |      |
|              | TR Notweet (MP30a)                        |  |         | USA  | English    | 2    |



# Tool: WTR - Web The Ripper

WTR - Web The Ripper 2 allows to select and download files that are linked from a specified web page

It analyzes input URL and then displays a list of all downloadable files (images, html, programs, mp3 etc.) allowing to select all or individual files

The files are downloaded to a folder of choice and the program can also be configured to automatically launch anti-virus scanner

In addition, you can specify an extension filter to limit downloads to the specified file types



# WTR - Web The Ripper: Screenshot

| WTR - Web The Ripper 2<br>Content selection You must now select which content following items were found by using   |   |
|---|---|
| entered previously.   | 🔕 WTR - Web The Ripper 2                                      |
| <ul> <li>m http://www.snapfiles.com/sfs</li> <li>m http://www.snapfiles.com/fav</li> <li>m http://www.snapfiles.com/</li> <li>m http://www.snapfiles.com/fee</li> </ul> | 5 Select the download destination                             |
| http://www.snapfiles.com/fee http://www.snapfiles.com/fee http://www.snapfiles.com/fee http://www.snapfiles.com/fee Select by regex ? () Analyze ? The regular e Ba     | You may now decide where you want to download the content to. |

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## Tool: HTTrack Web Site Copier



This tool mirrors an entire website to the desktop

You can footprint the contents of an entire website locally rather than visiting the individual pages

Valuable footprinting tool



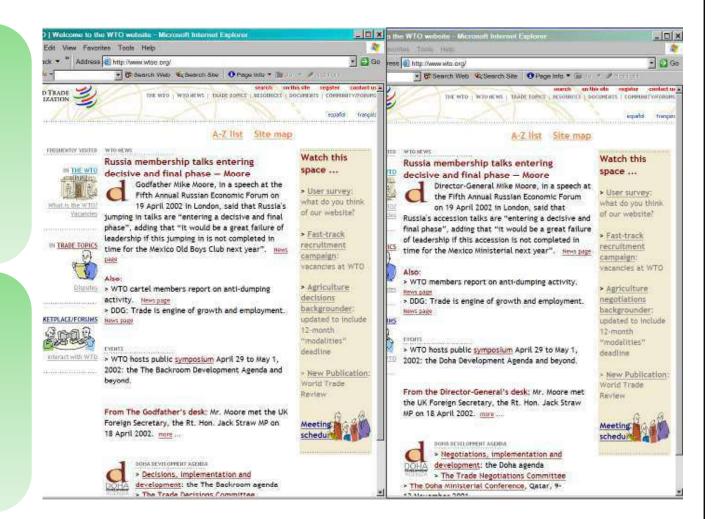
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| ⊕& 31⁄2 Floppy <a:></a:>             |  |  |
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| 🕀 🛅 Cracking 2002                    | WinHTTrack   |  |
| 🕀 🛅 DigiMode                         |  |  |
| 🕀 🛅 Documents and S                  |  |  |
| 🕀 🛅 e-mail abuse                     | Proxy Scan Rules Limits Flow Control Links Build Spider                              |  |
| 🕀 🧰 EagleX                           | Use wildcards to exclude or include URLs or links.                                   |  |
| Hacking 2002                         | You can put several scan strings on the same line.                                   |  |
| 🕀 🧰 indianZ                          | Use spaces as separators.  |  |
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Reamweaver lets the user automatically "funhouse-mirror" anyone's website

When a visitor visits a page on your Reamweaver site, Reamweaver gets the page from the target domain, changes the words as you specify, and stores the result (along with images, etc.)

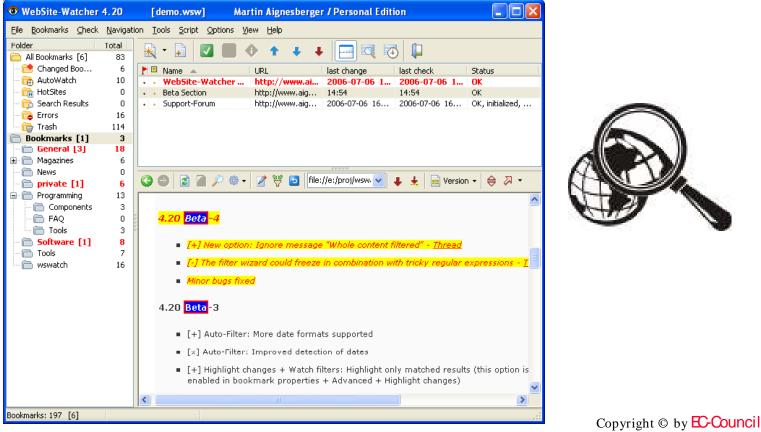


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### Website watchers can be used to get updates on the website

Can be used for competitive advantages





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## Website Watcher: Screenshot 1

🥗 WebSite-Watcher File Folder Bookmarks Search Import Backup Options View Help Folder Total + 🐧 Bookmarks 0 🌂 All Bookmarks [5] 80 🟲 🖪 🗖 Name URL last check Status Changed Book.... 5 WebSite-Watcher (PAD) 28-Nov-2001 - ... http://aignes.net/pad/... OK. HotSites 0 28-Nov-2001 - 07:59 0K FTP-Uploader http://www.ftp-uploader.de... NetCaptor http://www.netcaptor.com/ 28-Nov-2001 - 08:01 0K (+) AutoWatch 10 Opera - the fastest browser ... http://www.opera.com/ 28-Nov-2001 - 08:01 OK 12 Þ 🗙 Disabled Bookm... PADGen http://www.asp-shareware... 28-Nov-2001 - 08:01 ΠK C Errors 16 http://www.ritlabs.com/the... 28-Nov-2001 - 08:03 0K The Bat 龠 Trash 0 WebSite-Watcher BETA 0K http://aignes.net/beta.htm 🔅 28-Nov-2001 - 12:33 💐 General [3] 18 WinBAB 28-Nov-2001 - 08:02 http://www.rarsoft.com/wel... ΟK 🔍 Magazines 6 < > News 0 🔚 🗸 📄 🖌 file:///E:/proj/w 🔜 6 **G D** 2 💐 private [1] 1 + 1 승교 ----13 🐚 Programming setting "use default path" was enabled 3 🔍 Components [-] buqfix: button "Test filter" in dialog "ignore 🔍 FAQ 0 userdefined strings" didn't work properly, if there were 🔍 Tools 3 more than one regular expressions entered Software [1] 8 [-] minor bugs fixed 🗎 Tools 7 🔍 wswatch 16 3.31 Beta [+] Bookmark properties / new check option: max. one update per week [+] Bookmark properties / new AutoWatch option: max. one update per week [+] New report fields: </--wsw\_note--> and </--</p> wsw\_note\_format--> [-] relative links were not converted correctly to Bookmarks: 80 [5] Fertig

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|            |                      |   | _ |  |  |  |  |  |
|------------|----------------------|---|---|--|--|--|--|--|
| Name:      | WebSite-Watcher BETA |   |   |  |  |  |  |  |
| URL:       | http://aignes.net.   | /beta/beta.htm  |   |  |  |  |  |  |
|            | Alternative Check    | -URL (if empty, URL will be checked)  |   |  |  |  |  |  |
|            |                      |   |   |  |  |  |  |  |
| Checking-r | ent<br>ate<br>ze     | Options when checking websites for changes          Ignore all links and images/banners         Ignore all HTML-Tags         Ignore userdefined strings         Watch only userdefined strings         Ignore all numbers         Ignore all typical date-strings         Test filter | < |  |  |  |  |  |

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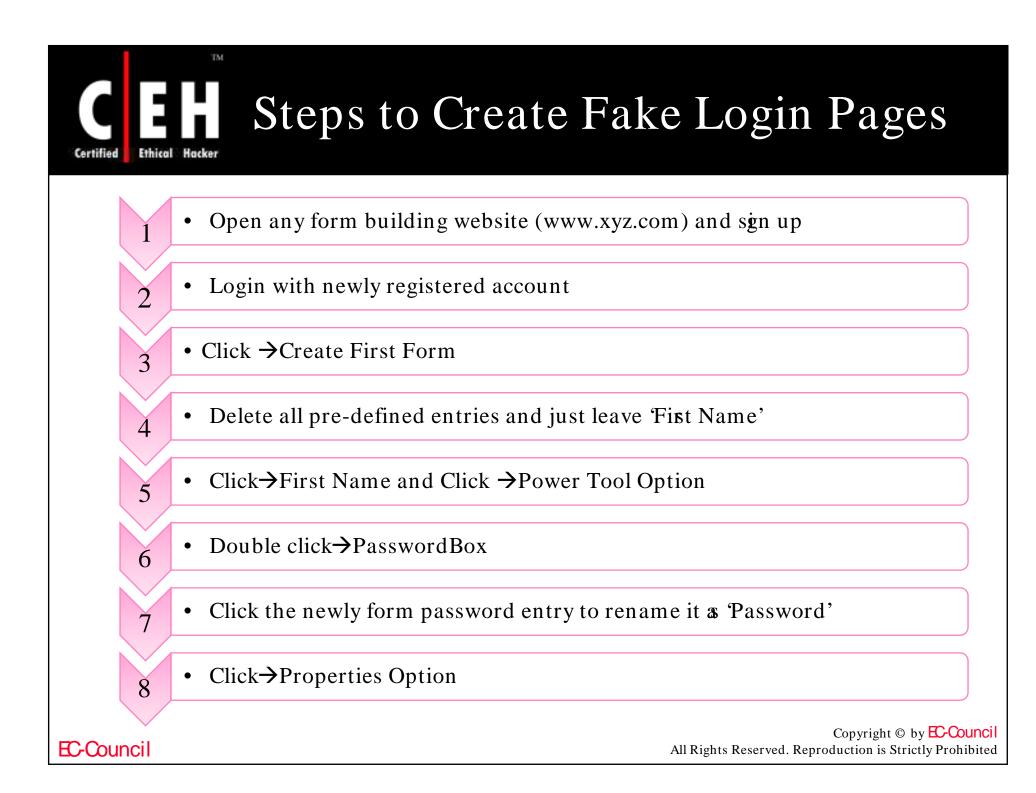
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# How to Fake Websites

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## How to Create Fake Login Pages (cont'd)

• Give any title to the form

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- Put any link, say http://www.google.com in ThankYou URL
- Click $\rightarrow$ Save and click  $\rightarrow$ Source Option
- Two Options: Option 1 & Option 2 are visible, copy the full code of 'Option 2'
- Open notepad and write the 'Option2' code
- Save the notepad file as index.html
- Host this 'index.html' on Internet by using FREE hosting provider service
- Login in your hosting account and open 'File Manager'
- Upload index.html

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## Faking Websites using Man-in-the-Middle Phishing Kit

This kit enables hackers to sit between prospective marks and legitimate businesses

Using Universal Man-in-the-Middle Phishing Kit, an attack can be launched to import pages from any target website

Malicious users can use this kit to do phishing attacks

It can intercept any type of credentials submitted to a target site

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### Faking Websites using Man-in-the-Middle Phishing Kit (cont'd)

Fraudsters use Universal Man-in-the-Middle Phishing Kit to create a fake URL via a simple and user-friendly online interface

This fake URL communicates with the legitimate website of the targeted organization in real-time

The target victim receives a phishing email and when clicking on the link s/he is directed to the fake URL



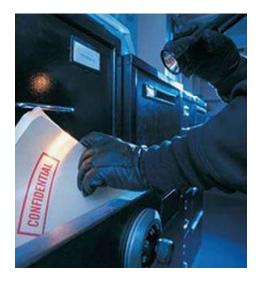


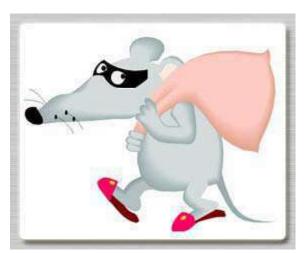
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Using Universal Man-in-the-Middle Phishing Kit, attackers can launch attack to import WebPages from any target website

This kit can launch attacks, which can intercept any type of credentials submitted to the site after the victim has logged into the account





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- Perform whois lookup for personal details
- Extract DNS information

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- Mirror the entire website and look up names
- Extract archives of the website
- Google search for company's news and press releases
- `Use people search for personal information of employees
- Find the physical location of the web server using the tool "NeoTracer"
- Analyze company's infrastructure details from job postings
- Track the email using "readnotify.com"

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# What Happened Next

Mason footprints Xmachi Inc and gets some critical information which helps him in his assault on the notebook manufacturer.

The following is a partial list of information that Mason gathered :

- Domains and Sub Domains
- IP address and address range
- Contact Details of some employees including the Nework Administrator; it included telephone number, email id, and address
- Current Technologies
- DNS information
- Firewalls

Mason now has enough information to bring down the network of Xmachi Inc



Information gathering phase can be categorized broadly into seven phases

Footprinting renders a unique security profile of a target system

Whois and ARIN can reveal public information of a domain that can be leveraged further

Traceroute and mail tracking can be used to the target specific IP and later for IP spoofing

Nslookup can reveal specific users and zone transfers can compromise DNS security

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"I'm paid \$4,000,000 a year. You're paid \$40,000. The only difference is a few zeros. Everyone knows that zero equals nothing. So what's the problem?"



"Information security is becoming a big problem here. Do you still have my Captain Crunch decoder ring, Ma?"