Web Hacking

KSAJ Inc.
www.PENETRATIONTEST.com

HaX0rz Toolkit

- Complicated 'sploits that need a
 Bachelor's degree to understand and
 use
- Scripts in various languages and syntaxes like C, PERL, gtk and bash
- Automated scanning tools like nmap and nessus
- A web browser

A Web Browser?

- Web surfing:
 - Is easy to do,
 - Is Operating System independent,
 - Doesn't require intimate knowledge of "the system",
 - Provides access to vast amounts of data and information,
 - and topped off with all kinds of data mining tools

Web Features

- Reverse phone number searches
- Detailed address topological maps
- Satellite photography of target area
- Resumes
- Phone and Email lists
- Likely targets described in detail
- Exploit information easy to obtain
- Data aggregation makes it more serious

What We'll Learn

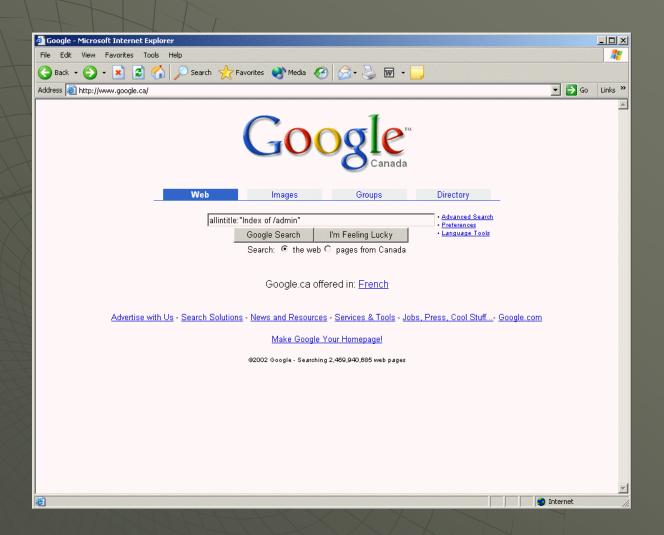
- Methods of Reconnaissance
- The level of sensitive detail companies and organizations leave exposed to the Internet
- The level of detail about specific people on the Internet
- The effect of data aggregation on privacy

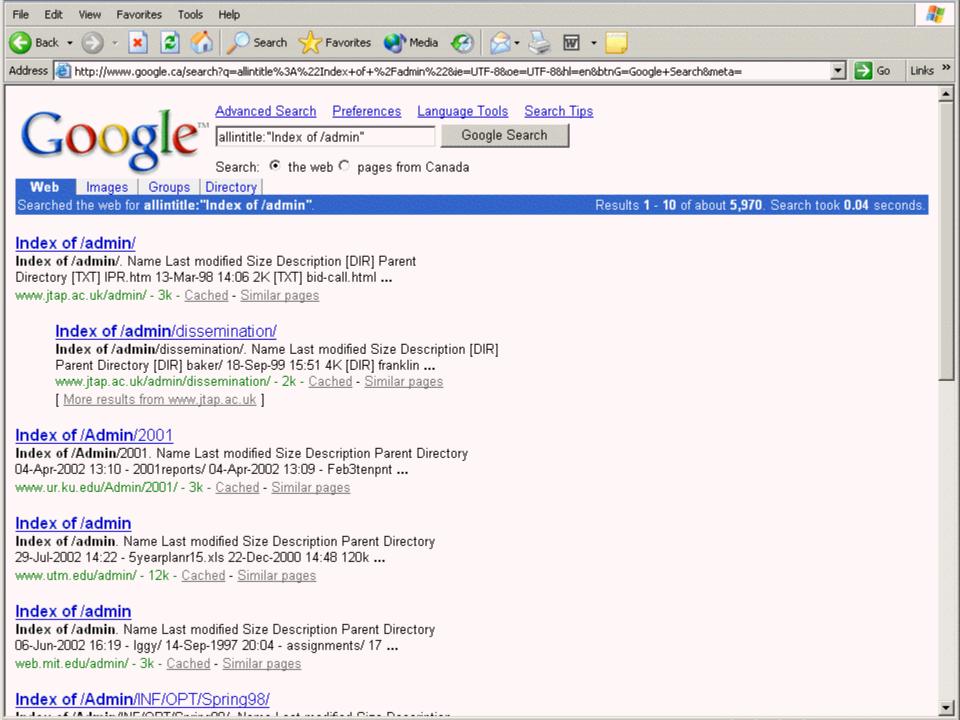
Where to start?

- Search Engines are one of the first things people learn to use on the Internet
- Most use highly effective search algorithms to mine the Internet
- Most provide equally advanced search abilities to the user

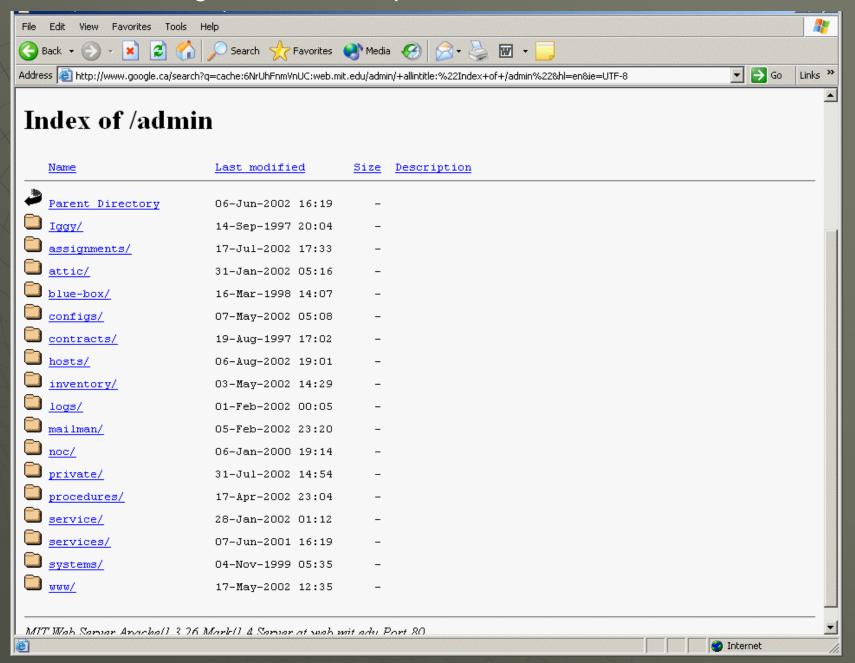


allintitle:"Index of /admin"

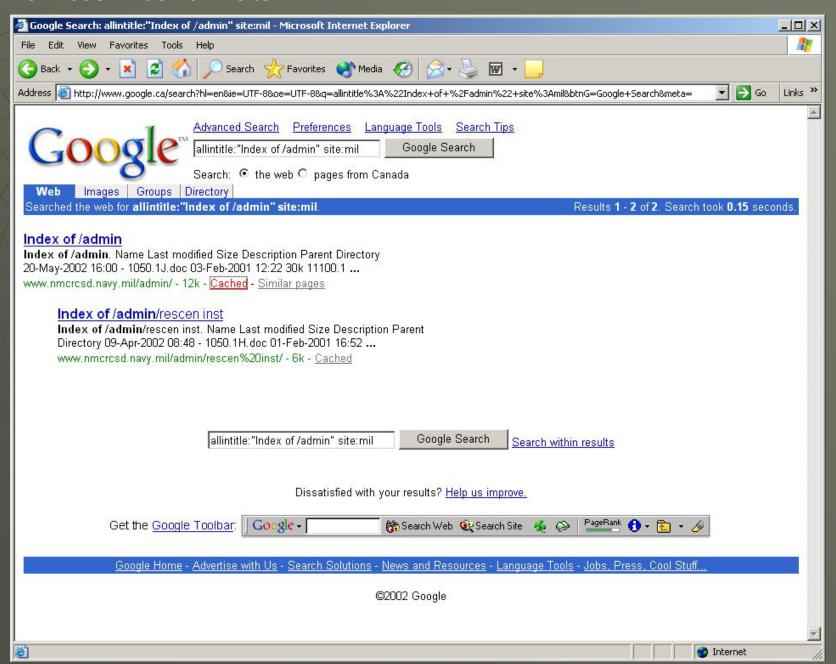


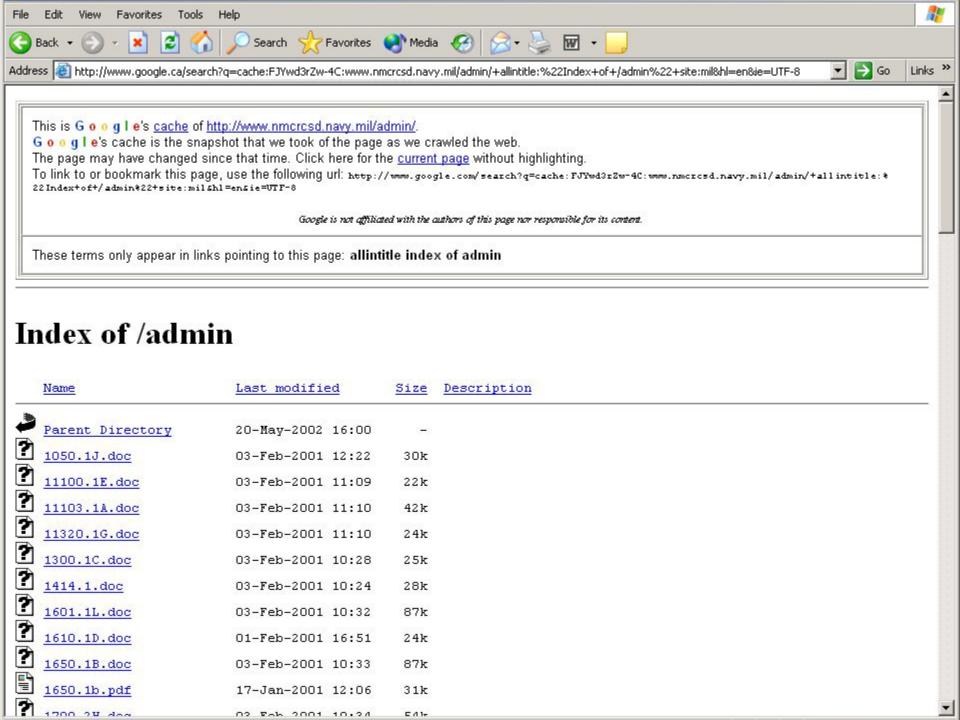


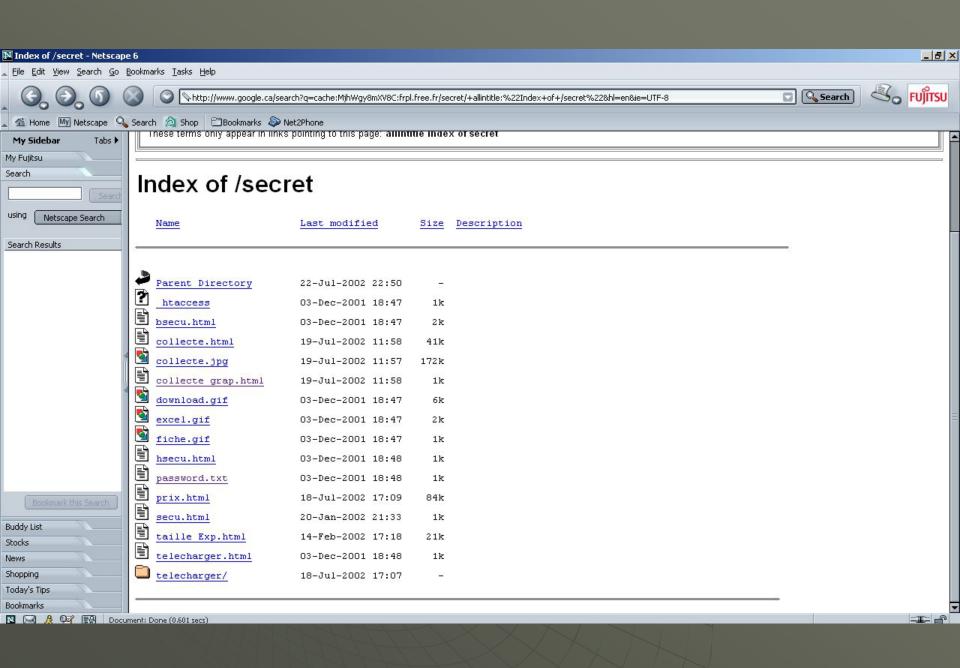
• Here is a Google hit from MIT, pulled from the cache

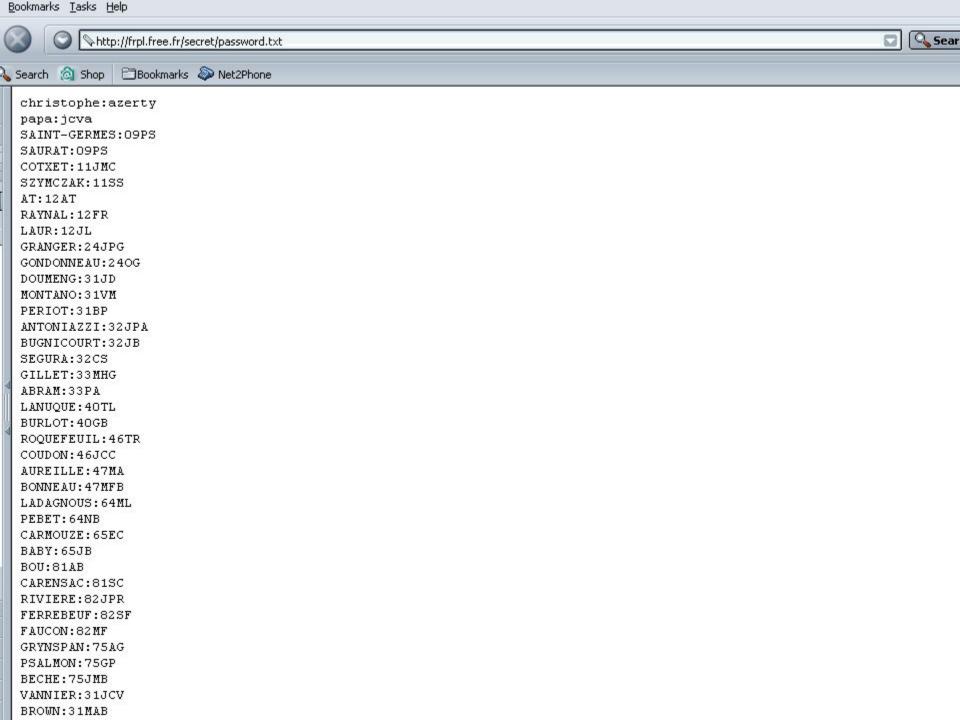


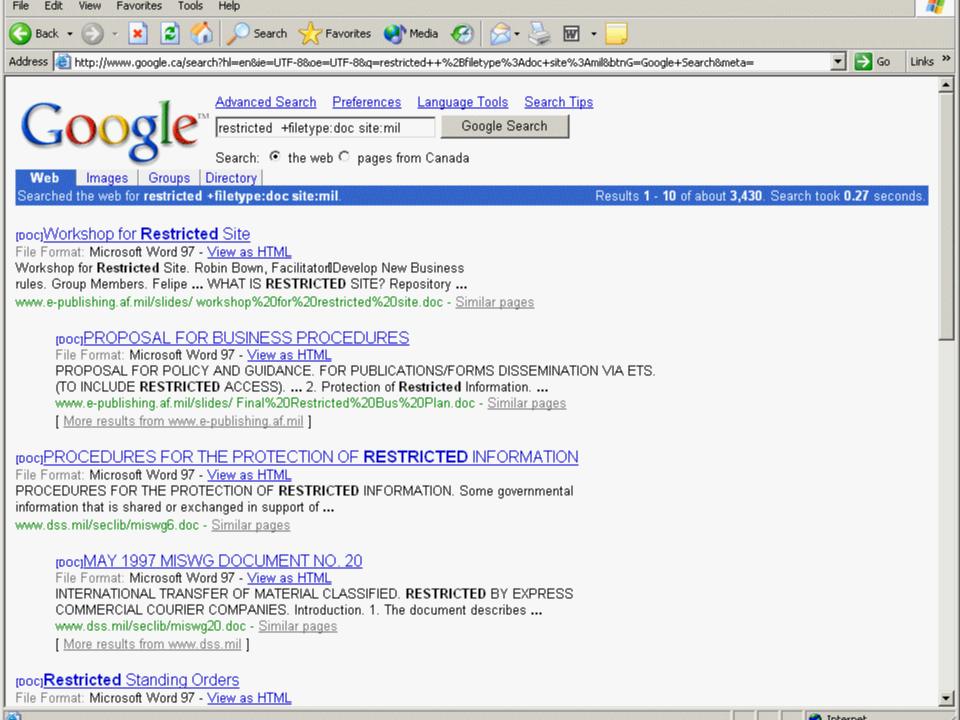
allintitle:"Index of /" site:mil

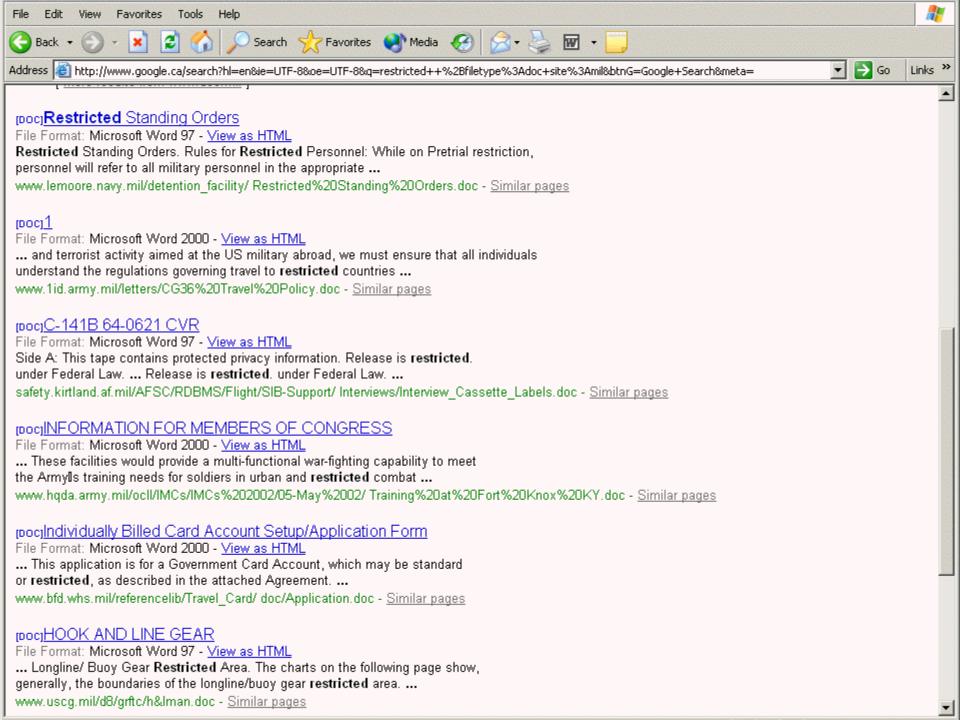


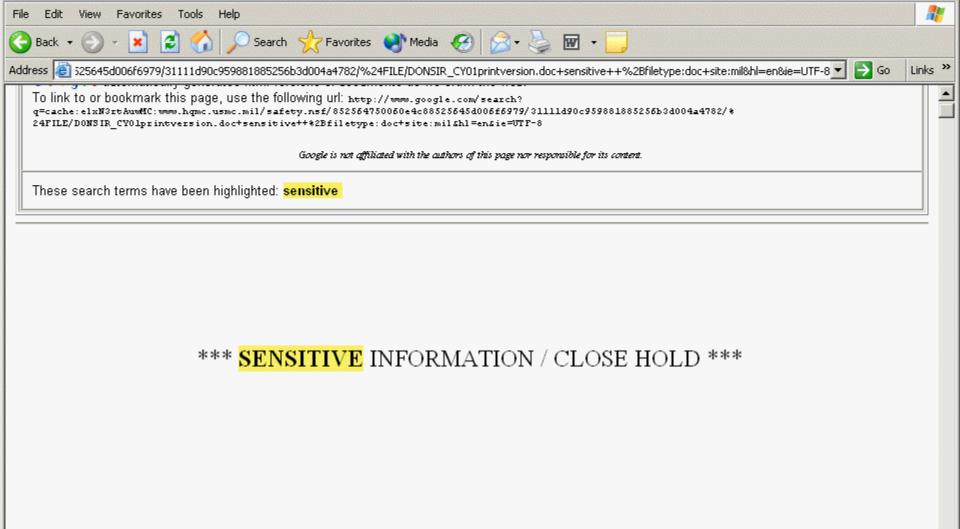












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Suicide Incident Report

Department of the Navy

Sometimes it works when broken

- From an allintitle:"Index of /admin" search
- Admin account had been patched
- But the error information was pretty interesting, too...
 - Within the full page error report was:
 - Full paths to libraries /home/faraway/opt/cancat/lib
 - /usr/local/share/perl/5.6.1/Apache/ASP.pm
 - /usr/local/lib/perl/5.6.1/DBD/mysql.pm

Search Engines

- allintitle:"Index of /"
- site:gov site:mil site:ztarget.com
- filetype:doc filetype:pdf filetype:xls
- [view as html]
- intitle:, inurl:, allinurl:
- Filetypes include: pdf, ps, wk[12345], wki, wks, wku, lwp, mw, xls, ppt, doc, wps, wdb, wri, rtf, ans and txt

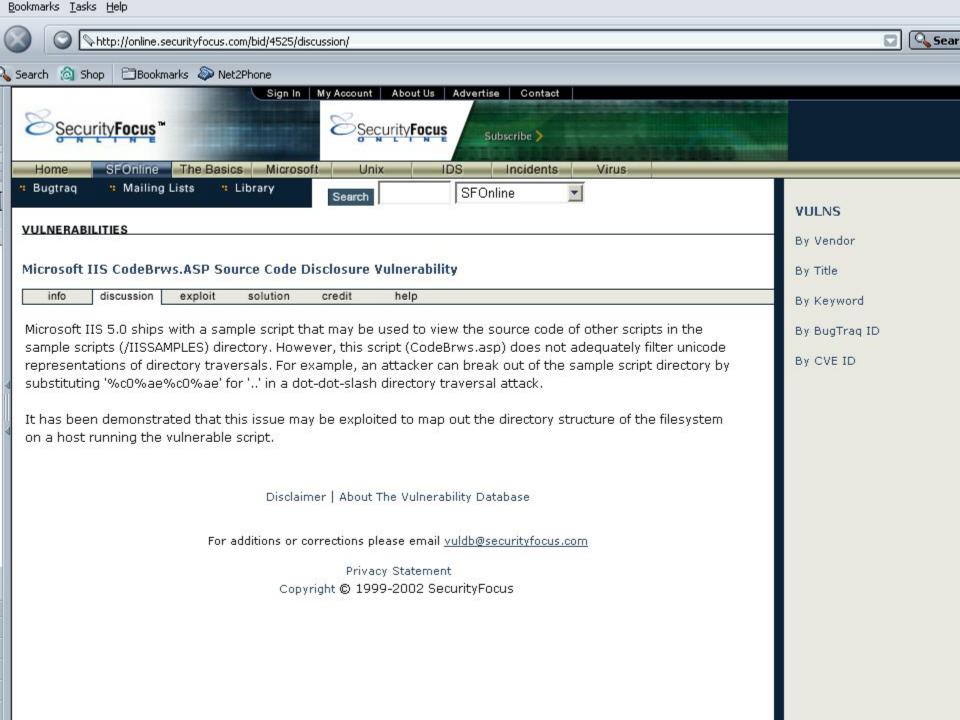
- Far too many password files to bother counting anymore
- Access and error logs from a hotel chain
 - Included booking information and how long customers were staying
 - Some very well-known people had their full vacation schedules made available to the public
- Military "Procedures and Practices"

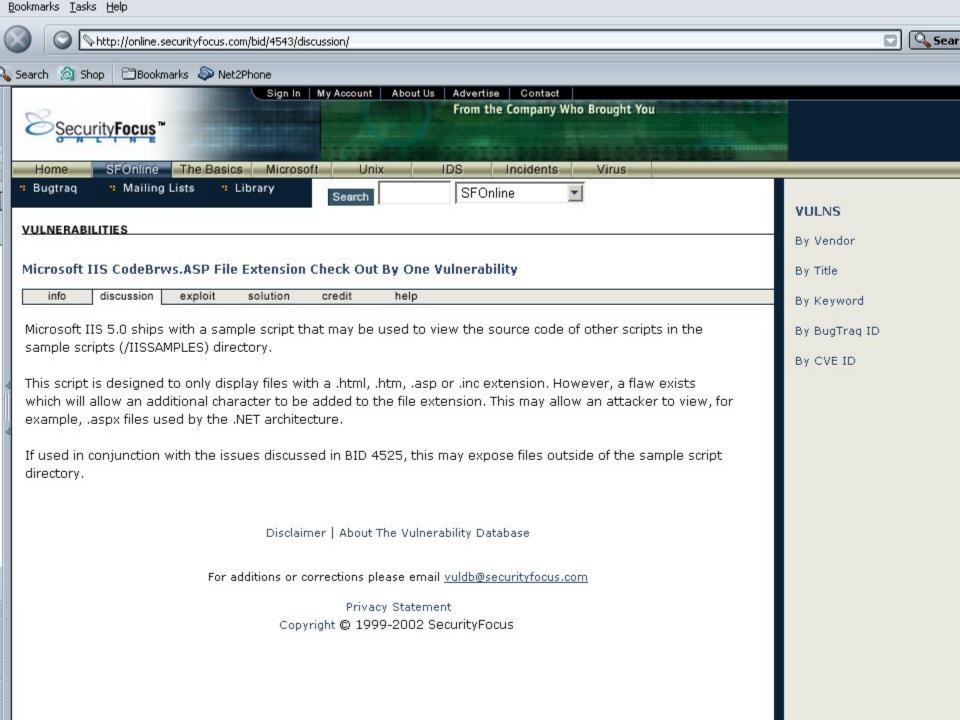
- allintitle:"Index of /" +confidential filetype:doc
 - A regulatory matters postal letter to an executive at a telecommunications commission, which contained competitor and specific revenue information, and made the following declaration:
 - The release of such information on the public record would allow current and potential competitors to develop more effective business and marketing strategies...

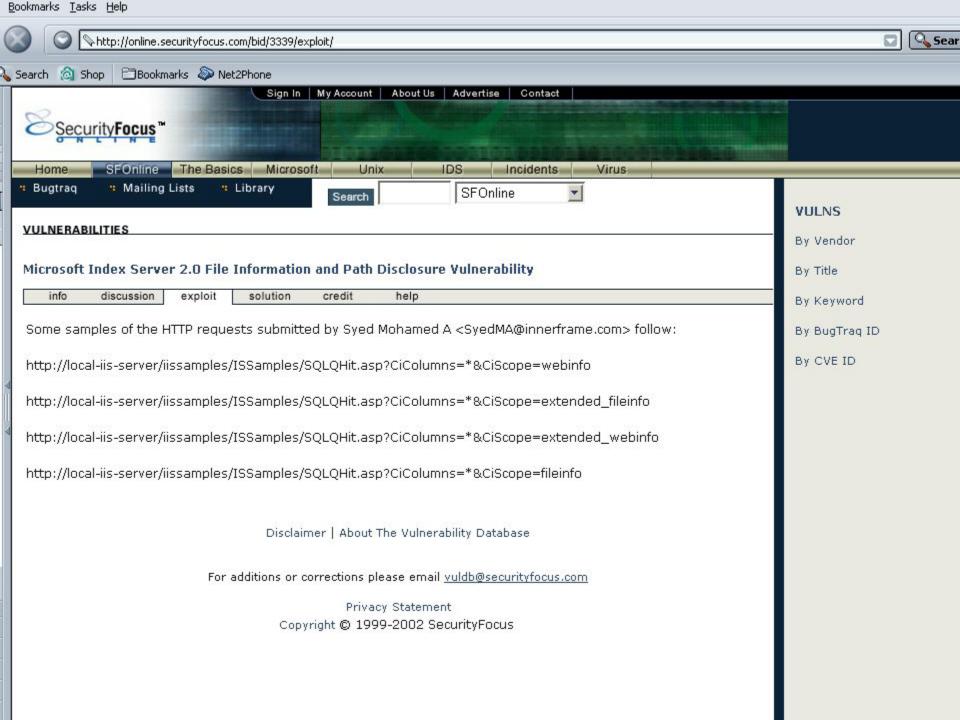
- Searches for WS_FTP.LOG give a rather detailed list of files that are updated regularly, and often provides internal network IP information normally hidden from the Internet
- Name, job title, phone number, and email address of mailroom staff at major military sites
- Inter-department electronic funds transfers

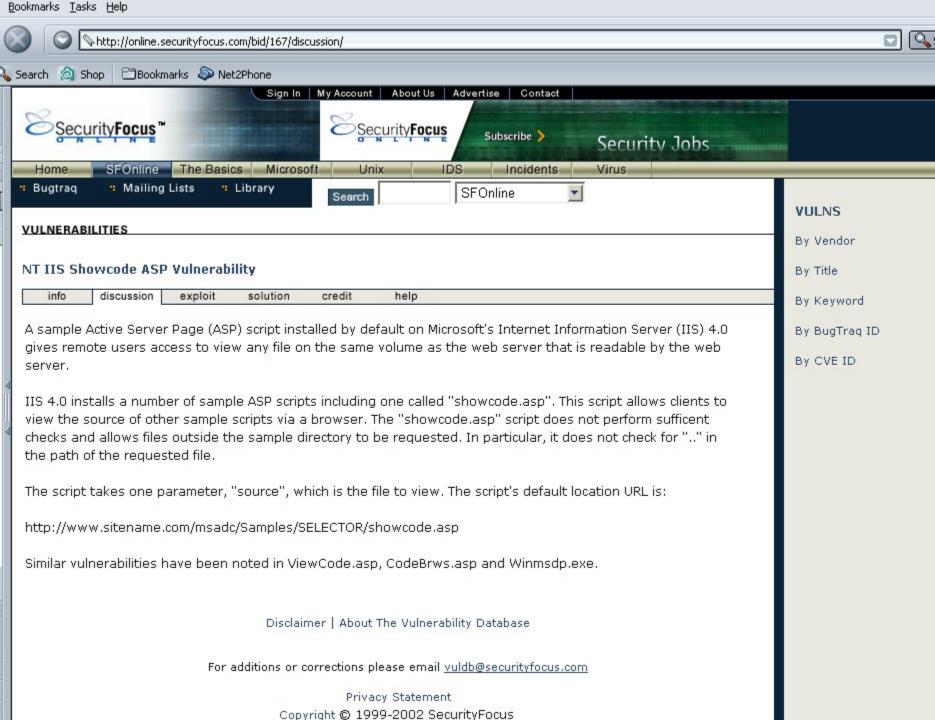
- robots.txt files tell search engines "don't look here"
- World-readable and in a known location so the search engines will find it easily, and ignore confidential or private directories
- What do you find when you do look in those directories?

- Passive scanning for vulnerable targets
- Where to find targets:
 - Search for phrases commonly found on web-based application interfaces (and especially their error messages)
 - Sites like http://www.securityfocus.com
 - provide information that can be used to create search criteria



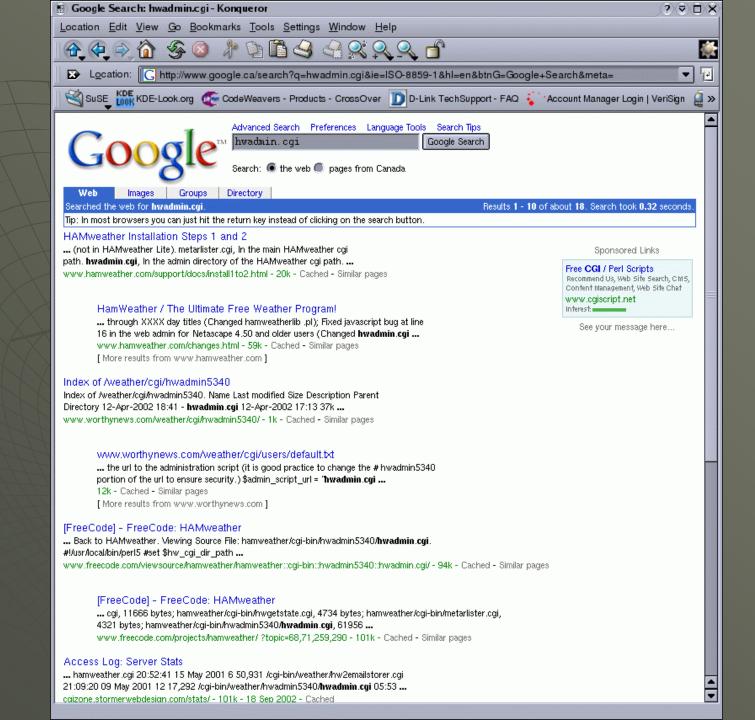


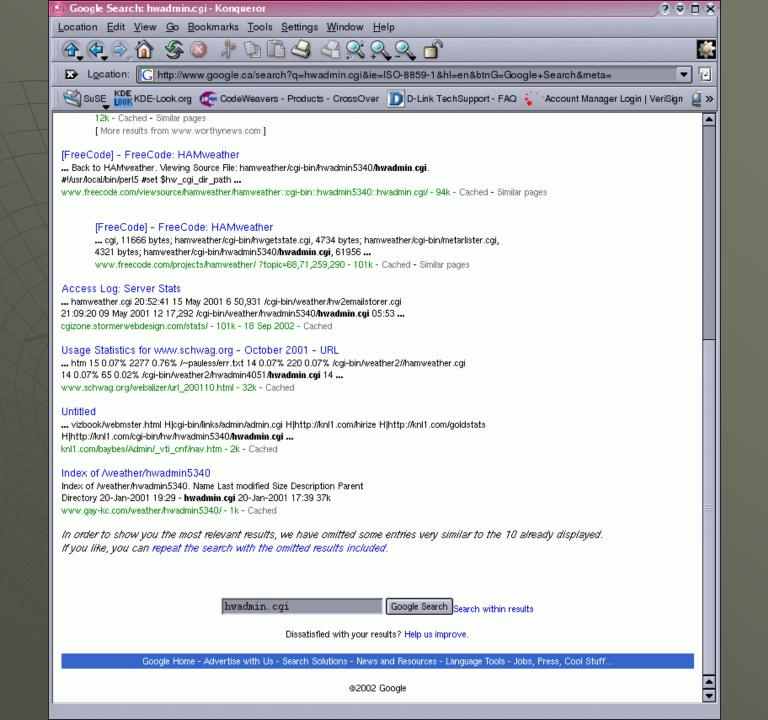


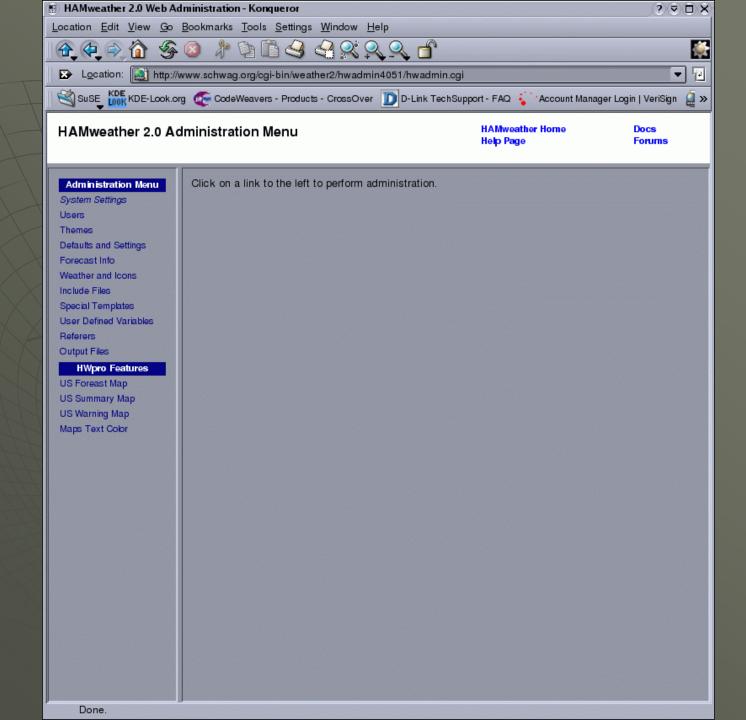


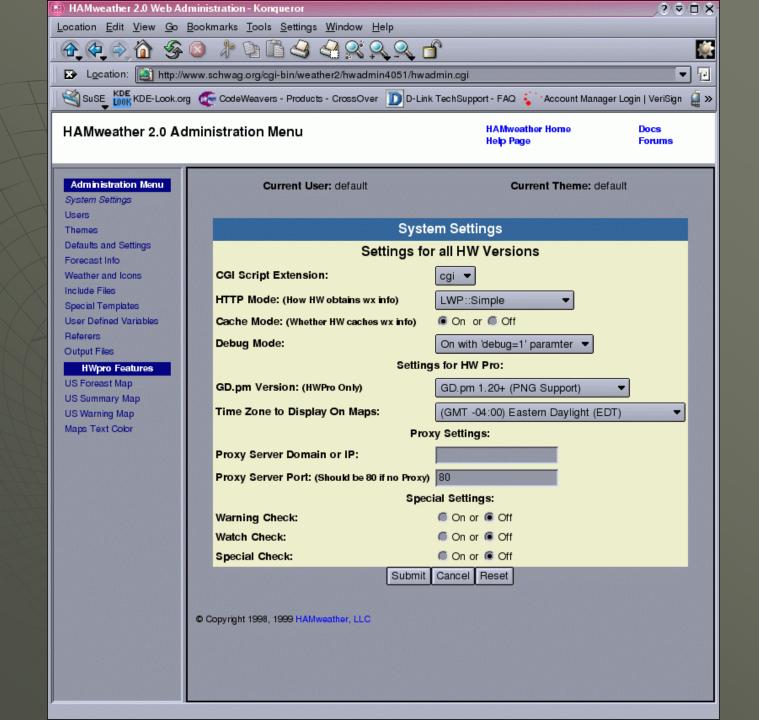
Unreported Vulnerabilities

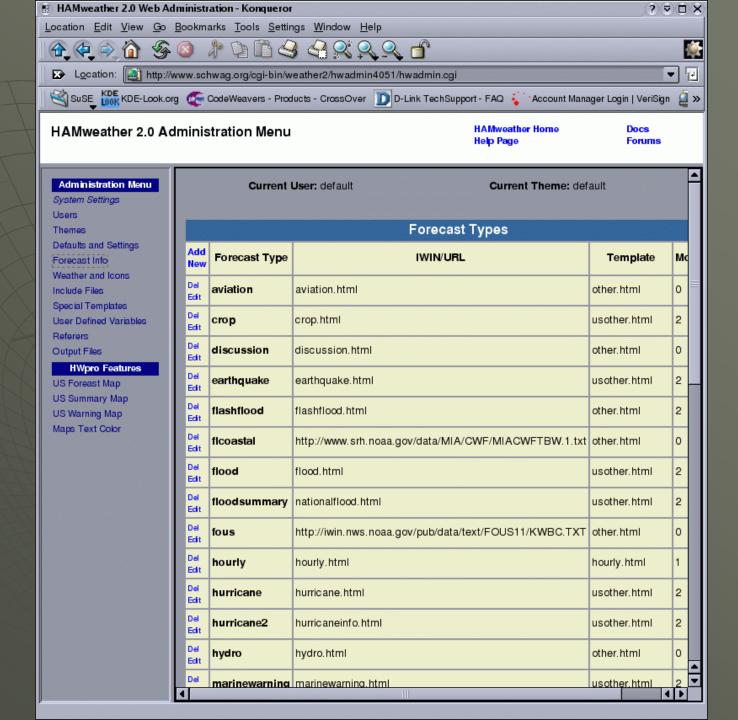
- Many vulnerabilities go unreported and unfixed, despite how obvious they are
- Example:
 - HAMWeather is a weather software package that allows websites to provide accurate weather information. Geared towards news sites.
 - Does not require authentication for any of its administrative processes
 - Lets search for that administrative program...

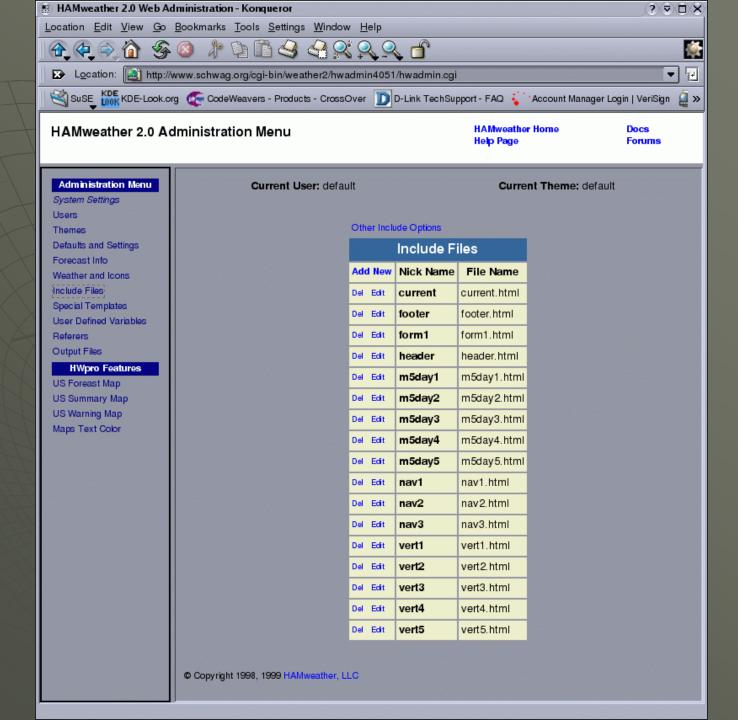












More Web Hacking

- Search engines are a treasure trove of information
- We've looked at general web search engines, but let's now look at more information specific sites
 - Administrative web servers
 - Reconnaissance from the sky
 - Proxies

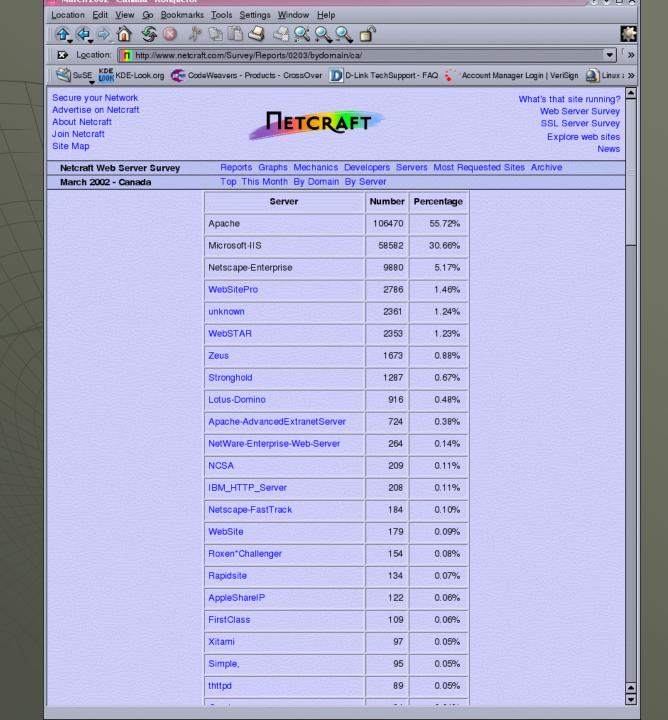
Administrative Web Servers

 Many devices come with web servers enabled by default:

- Printers
- Routers and Switches
- Wireless Access Points

Printers on the Web?

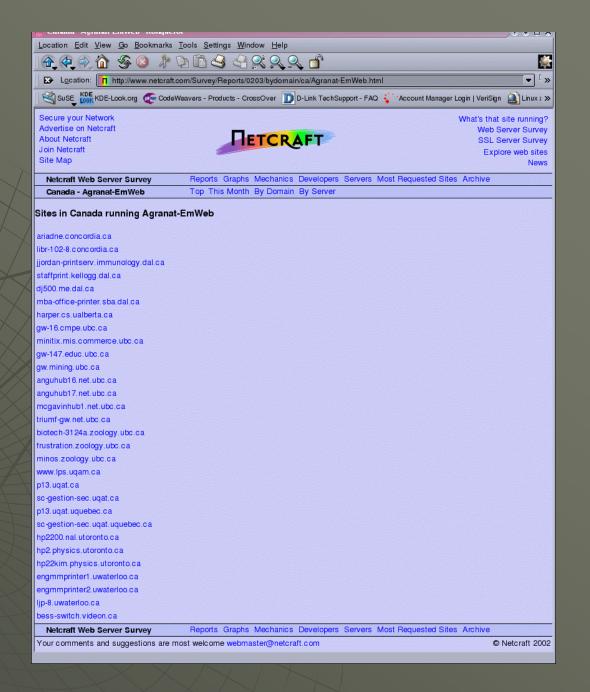
- Netcraft provides an ongoing tally of web servers operating on the Internet.
- Can we find web based administration?

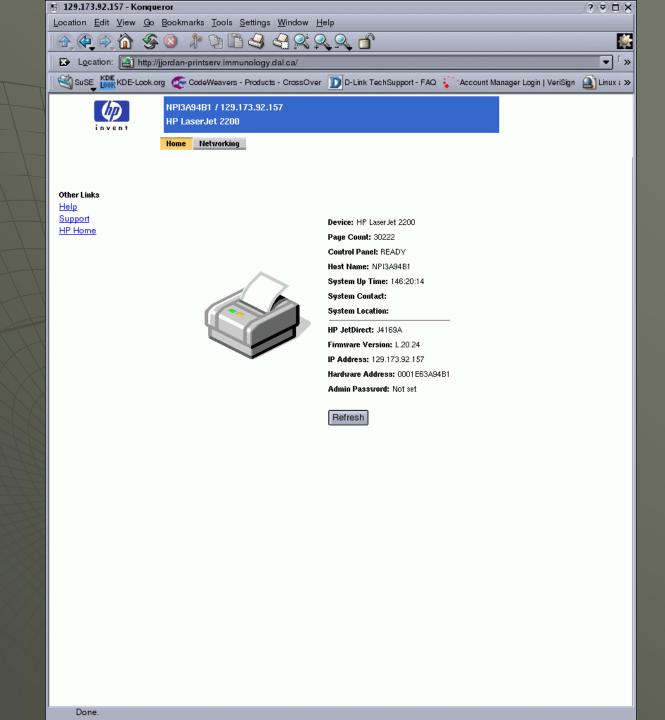


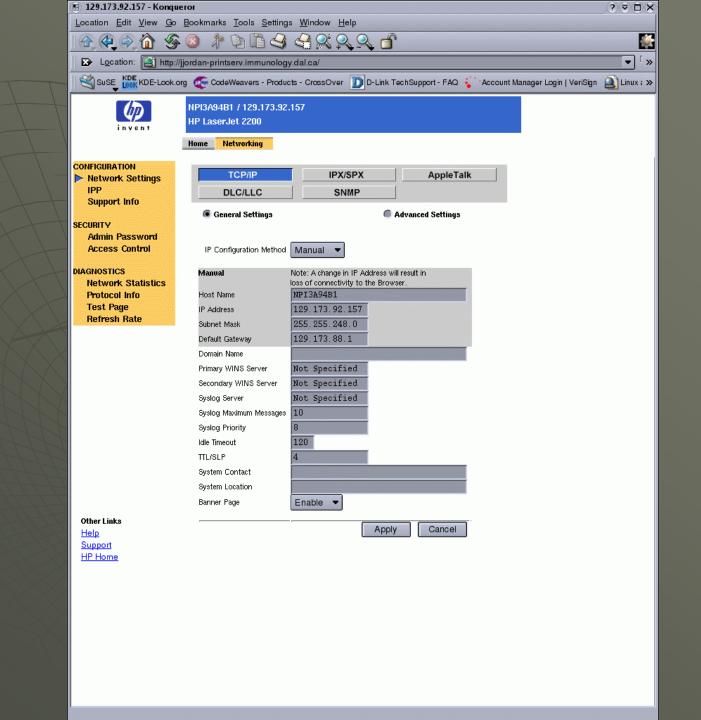
Agranat-EmWeb



Several sites seem to have left this particular printer wide open









Lexmark Optra T612 142.22.11.136



Toner Low

Emulations PCL Emula

PCL Emulation PS Emulation

Print Speed

20 Pages Per Minute

Lexmark Optra T612

Inputs

Tray 1 Capacity: 500 Tray 2 Capacity: 500 Multipurpose Feeder

Outputs

Standard Bin Capacity: 500

Connectivity

Parallel Serial Network

Print Server

Ethernet 10/100 MarkNet N2001e
IP Address 142.22.11.136
UAA (MSB) 00200018E500
Network Speed 10Mbps
Firmware Version 3.19.14

Contact / Location

1998017015 200-1128 Hornby St. Vancouver

Print

Configuration

Reports

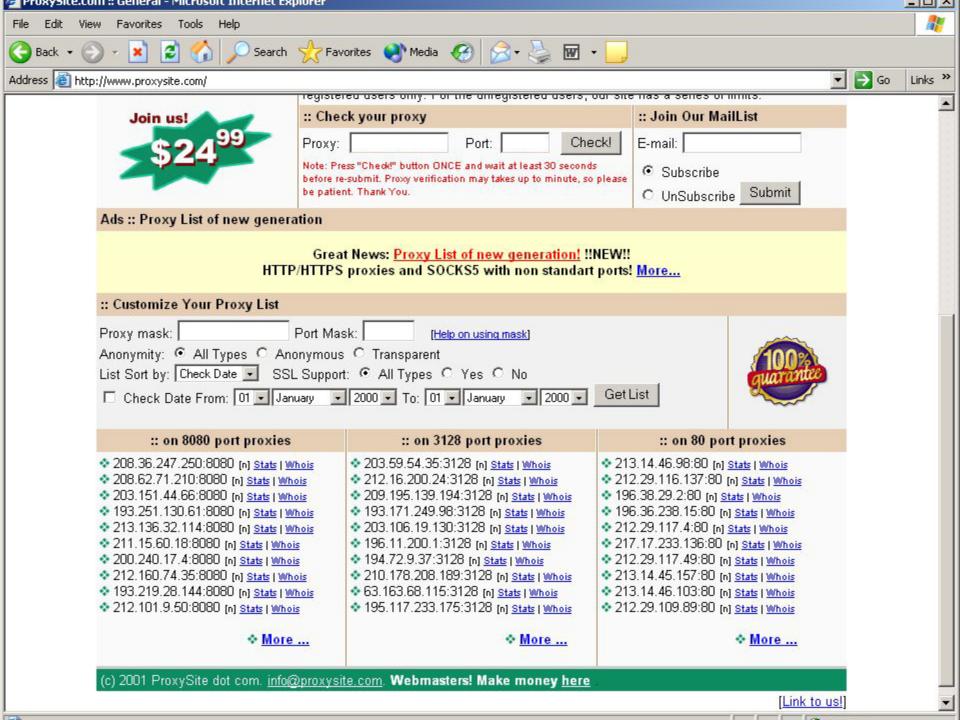
Job History

Links & Index

Non-Java Tabs

LEXM NRK TM
marknet@lexmark.com

Stalled



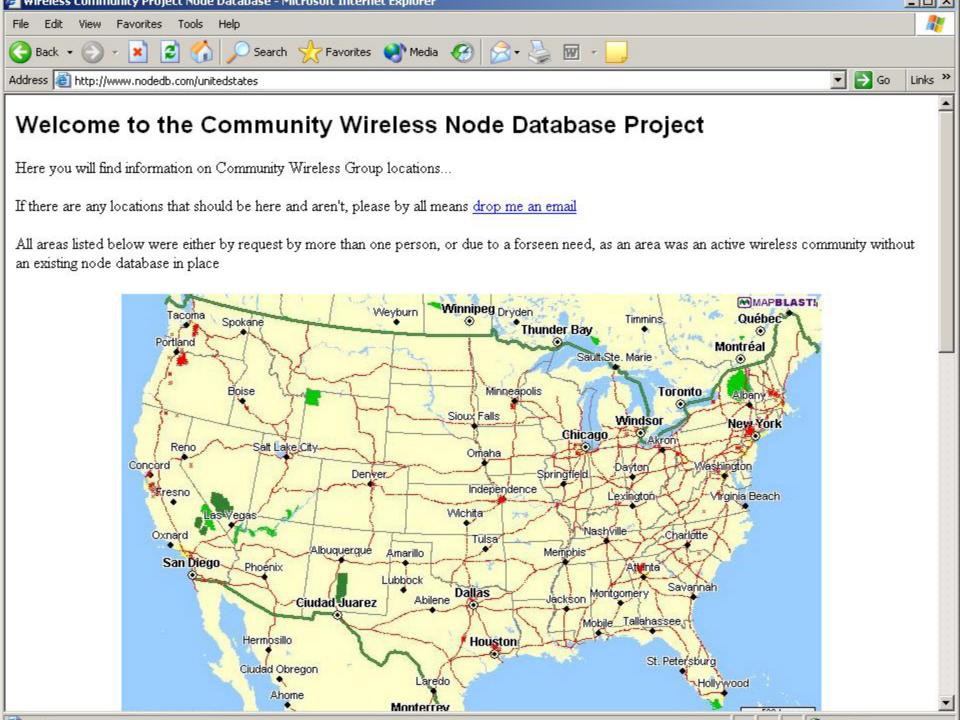
Reconnaissance

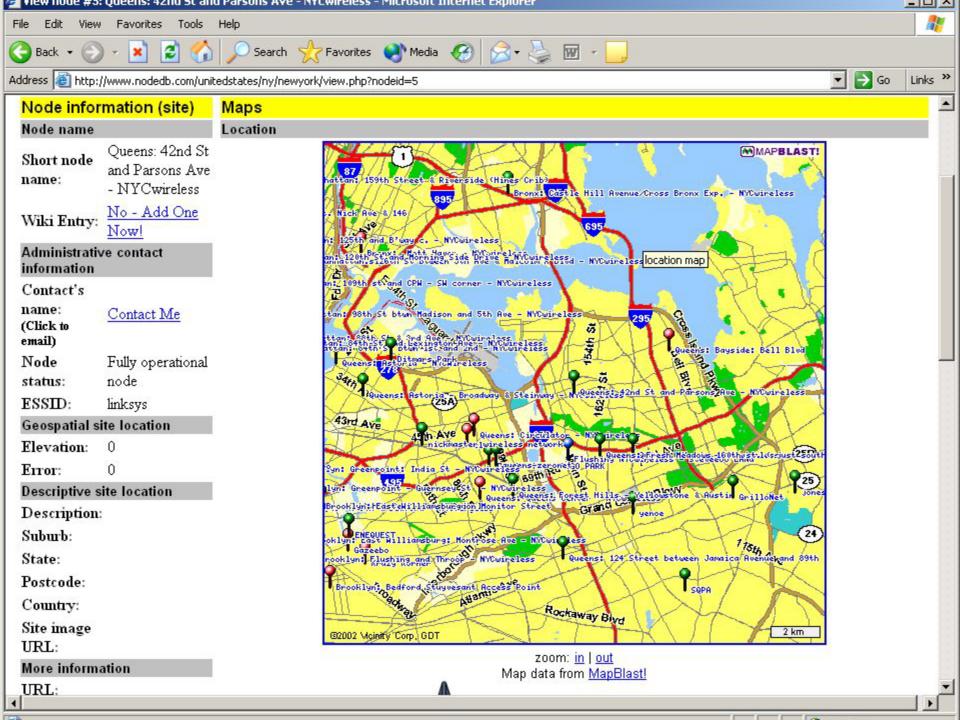
- We've seen a glimpse of various back doors available to web browsers
- Let's turn the tables now, and talk much closer to home
- How much personal detail do we put online for all to see?

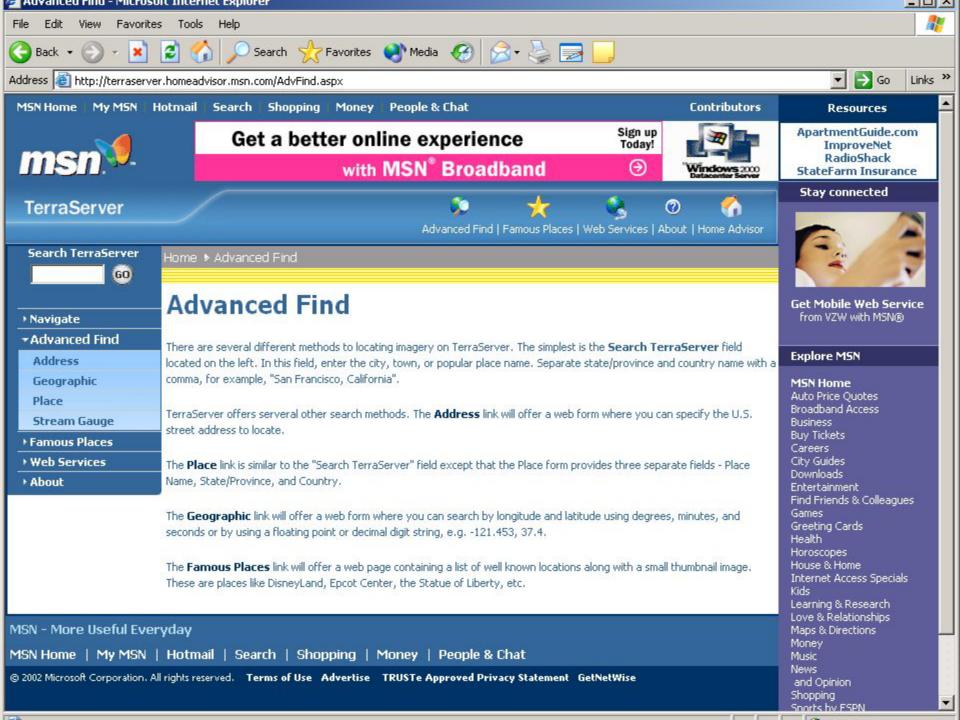
Reconaissance

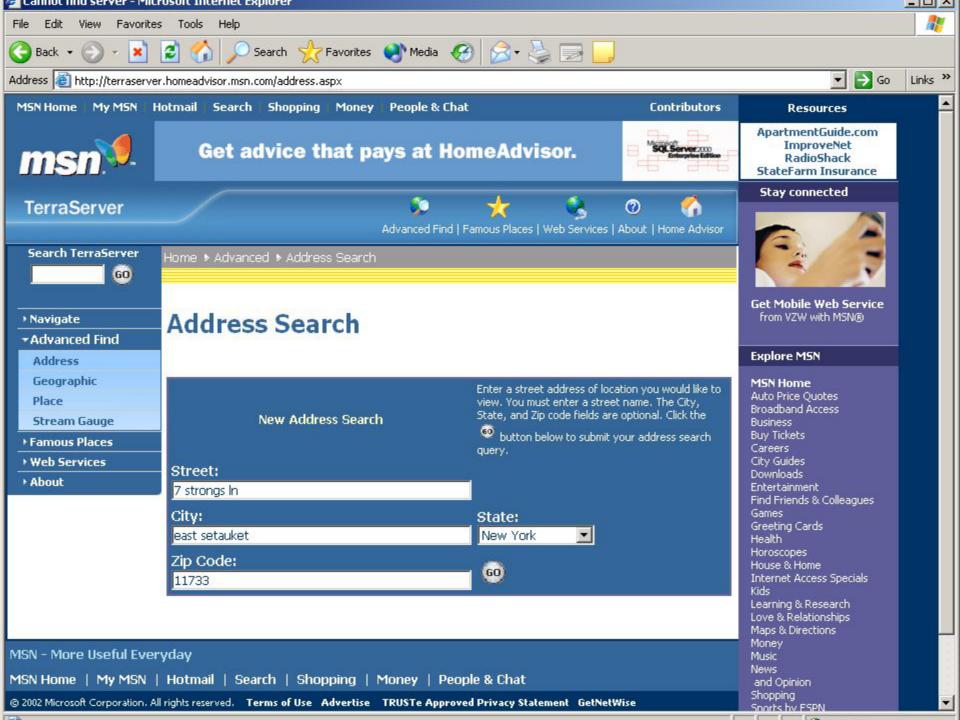
- Web surfing habits
- Cookies
- Resumes
- Web site histories (<u>www.archive.org</u>)
- News group posts
- Friends
- Relatives
- School archives
- Maps

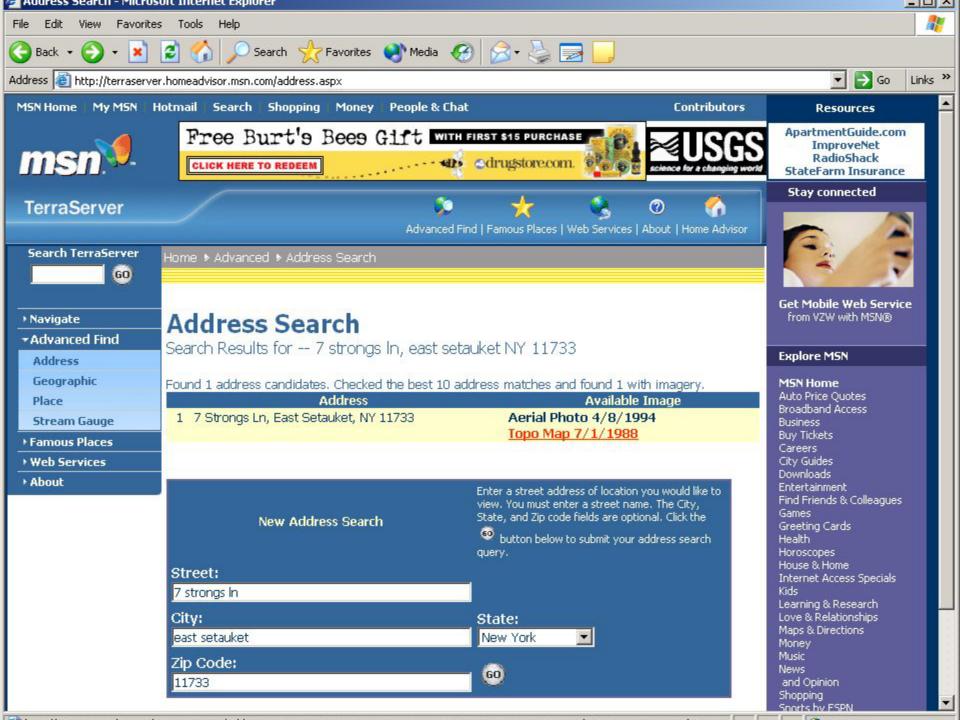


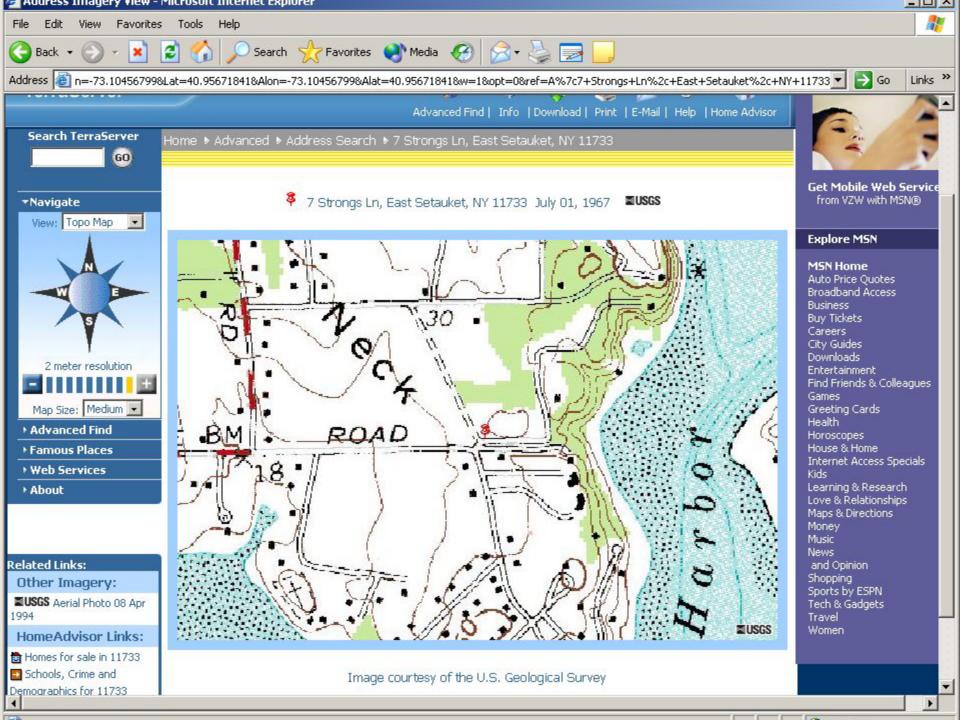


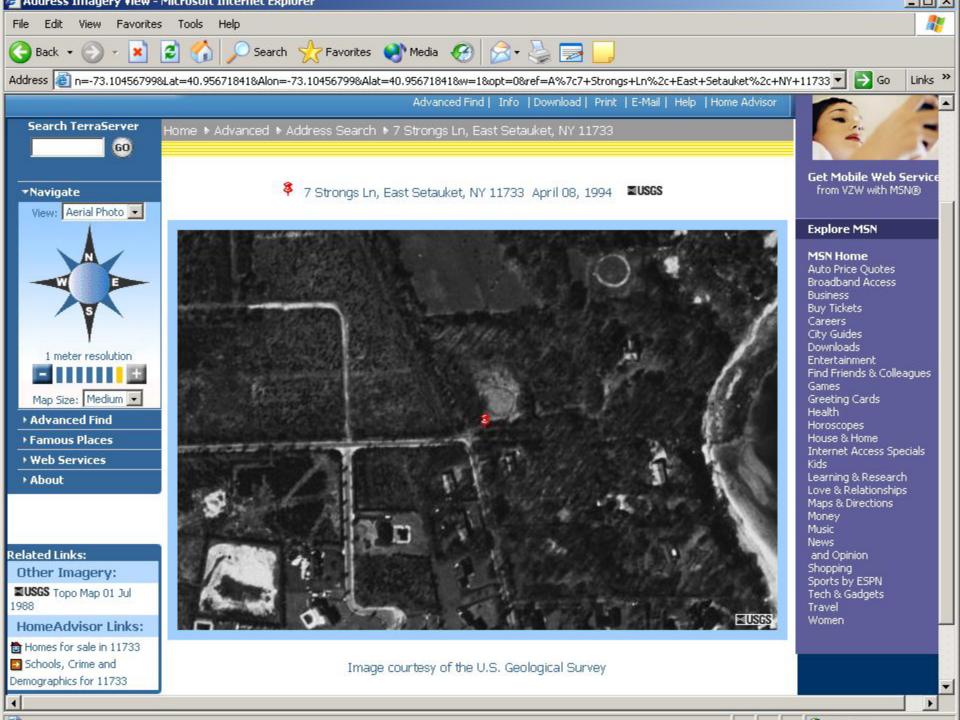












Final Thoughts

- We have shown a few ways that a web browser can be used to gather huge amounts of target information, and a few ways the web browser can be used to exploit trivial vulnerabilities
- There are many more online services like the ones pointed out in this presentation
- It is easy to collect and analyze this information to produce thorough profiles

Thank You

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