Scanning & Footpriting

Nmap, Netdiscover, Netcat, Masscan
WHOIS, Web Archive, OSINT

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!!! WARNING !!!

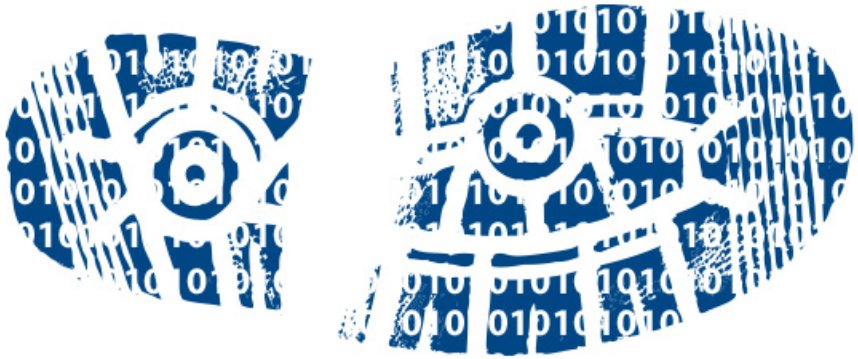
I and the Hacker Soc will not be responsible for your mistakes or actions with the information you will learn from this or any talks or workshops you participate

Footprinting

AKA Reconnaissance

Simply “gathering of information before the attack”

This could be from a WHO.is or DNS record, historic information from web.archive.org or OSINT from public posts.



Google Hacking - DORK

Google Hacking Database (GHDB)

Search the Google Hacking Database or browse GHDB categories

Any Category ▼ | Search | SEARCH

Date	Title	Category
2018-07-03	filetype:xls | xlsx intext:software license site:.gov	Files Containing Juicy Info
2018-07-03	filetype:xls | xlsx intext:cisco -cisco.com site:.gov	Files Containing Juicy Info
2018-07-03	intext:vmware virtual site:.gov filetype:xls | xlsx | doc | pdf	Files Containing Juicy Info
2018-07-03	(intitle:"plexpy - home" OR "intitle:tautulli - home") AND intext:"libraries"	Various Online Devices
2018-07-02	intext:define('AUTH_KEY', ' wp-config.php filetype:txt	Files Containing Passwords
2018-06-27	"Powered by 2Moons"	Advisories and Vulnerabilities
2018-06-26	intitle:"UltraDNS Client Redirection Service"	Various Online Devices
2018-06-26	"Powered byPlanet eStream"	Pages Containing Login Portals
2018-06-25	intitle:"This is pdfTeX, Version"	Files Containing Juicy Info
2018-06-25	inurl:wp-config-backup.txt	Files Containing Passwords

Footholds (74)
Examples of queries that can help an attacker gain a foothold into a web server

Sensitive Directories (166)
Googles collection of web sites sharing sensitive directories. The files contained in here will vary from sensitive to über-secret!

Vulnerable Files (62)
HUNDREDS of vulnerable files that Google can find on websites.

Vulnerable Servers (94)
These searches reveal servers with specific vulnerabilities. These are found in a different way than the searches found in the "Vulnerable Files" section.

Error Messages (100)
Really verbose error messages that say WAY too much!

Network or Vulnerability Data (84)
These pages contain such things as firewall logs, honeypot logs, network information, IDS logs... All sorts of fun stuff!

NEW **Various Online Devices** (386)
This category contains things like printers, video cameras, and all sorts of cool things found on the web with Google.

Web Server Detection (101)
These links demonstrate Googles awesome ability to profile web servers.

Files Containing Usernames (21)
These files contain usernames, but no passwords... Still, Google finding usernames on a web site.

NEW **Files Containing Passwords** (263)
PASSWORDS!!! Google found PASSWORDS!

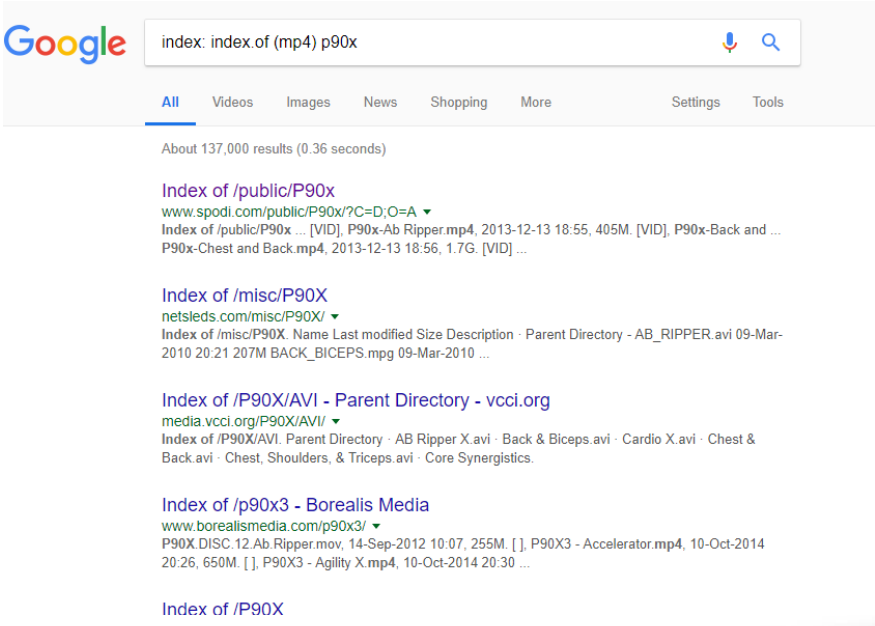
Sensitive Online Shopping Info (11)
Examples of queries that can reveal online shopping infomation like customer data, suppliers, orders, credit card numbers, credit card info, etc

NEW **Files Containing Juicy Info** (523)
No usernames or passwords, but interesting stuff none the less.

Pages Containing Login Portals (486)
These are login pages for various services. Consider them the front door of a websites more sensitive functions.

Advisories and Vulnerabilities (2017)
These searches locate vulnerable servers. These searches are often generated from various security advisory posts, and in many cases are product or version-specific.

Advanced	What you can do with it	Google this
site:	search only within a specific site	site:www.stanford.edu
filetype:	find a type of file: PDF, DOC, TXT ...	filetype:PDF
define:	find definitions for a word	define:audacity
intitle:	find words in the title of the webpage	intitle:inspirational
..	get ranges of numbers, dates, or prices	presidents 1800..1900
word * word	find other combinations of words between words	creative * writing
-word	search for homer, but NOT simpson	homer -simpson
"word"	find exact words—no synonyms or plurals	"peace" "freedom"
"set of words"	search for exact set of words, quotes or phrases	"I have a dream"



Index of /public/P90x

Name	Last modified	Size	Description
Parent Directory		-	
P90x-Ab Ripper.mp4	2013-12-13 18:55	405M	
P90x-Back and Biceps..>	2013-12-13 18:55	1.7G	
P90x-Cardio X.mp4	2013-12-13 18:56	1.0G	
P90x-Chest Shoulders..>	2013-12-13 18:57	1.8G	
P90x-Chest and Back.mp4	2013-12-13 18:56	1.7G	
P90x-Core Synergisti..>	2013-12-13 18:55	1.4G	
P90x-Kenpo X.mp4	2013-12-13 18:58	1.5G	
P90x-Legs and Back.mp4	2013-12-13 18:59	1.9G	
P90x-Patience Yoga.mp4	2013-12-13 18:59	943M	
P90x-Plyometrics.mp4	2013-12-13 19:00	1.5G	
P90x-Shoulders and A..>	2013-12-13 18:58	1.9G	
P90x-X Stretch.mp4	2013-12-13 19:00	1.4G	
P90x-Yoga X.mp4	2013-12-13 19:01	2.2G	

Apache Server at www.spodi.com Port 80

Index of /admin/report/stats - Balbriggan Community College

www.balbriggancommunitycollege.com/admin/report/stats/ ▾

Index of /admin/report/**stats**. Name · **Last modified** · Size · Description · **Parent Directory**, -. settings.php, 2010-07-14 00:01, 242.

Index of password txt facebook login - Northeast Smart Energy

nesmartenergy.com/annq/zdo.php?uw=index-of-password-txt-facebook-login ▾

Index of password txt **facebook login** [Randy Dave] Collection of comics cartoon porn. .... matter. index of/**parent directory**:filetype:htpasswd etc File download Password. ... Password. php **last modified** on 21/09/17 at 9:07 010010 Jan 2006 An ...

Index of /OnLineHelp/Utilities/BCD536-SD-CARD-STUFF - Scancat

www.scancat.com/OnLineHelp/Utilities/BCD536-SD-CARD-STUFF/ ▾

Index of /OnLineHelp/Utilities/BCD536-**SD**-CARD-STUFF. Icon Name **Last modified** Size Description. [DIR] **Parent Directory** - [ ] BCD436-536HPOM_EN_10.

PROTIP: links with ip addresses in them are often your best bet for finding cams.

EVERYONE:

1: copy links into google to watch unprotected security cameras

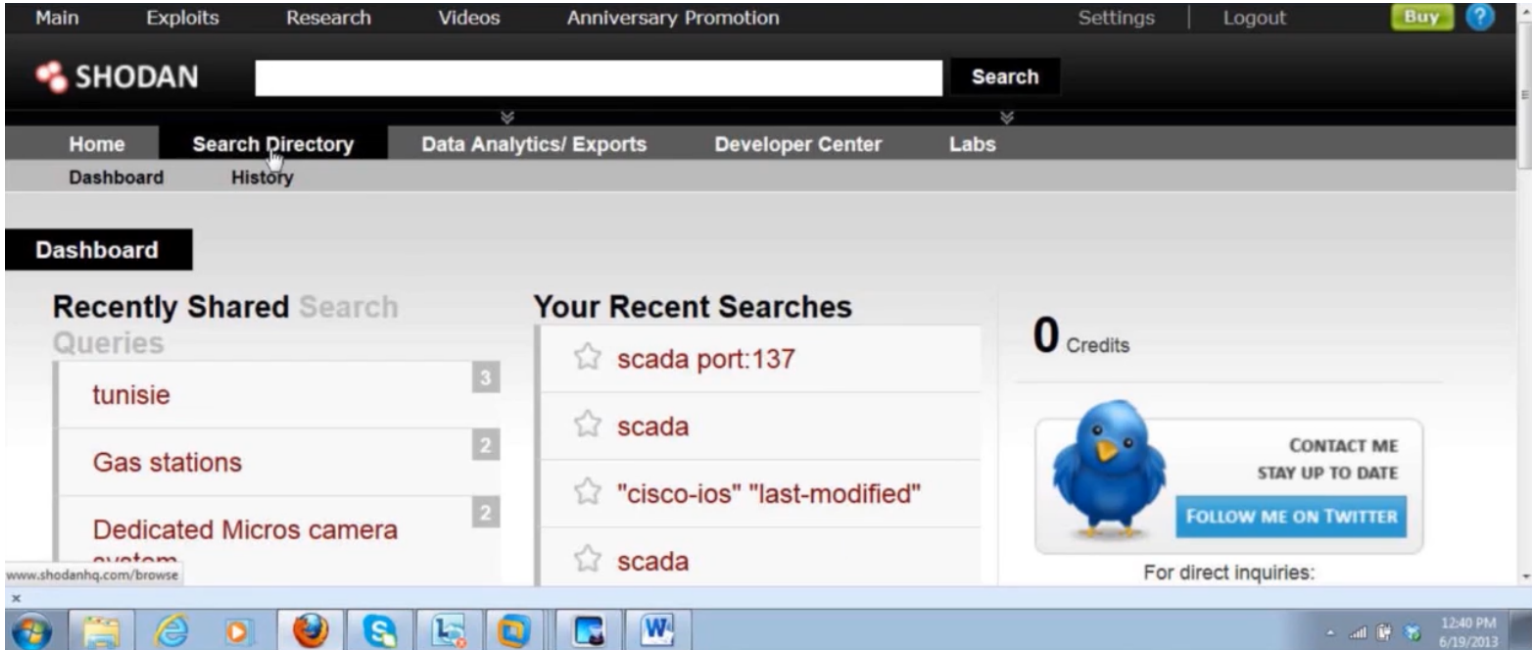
2: post interesting ones

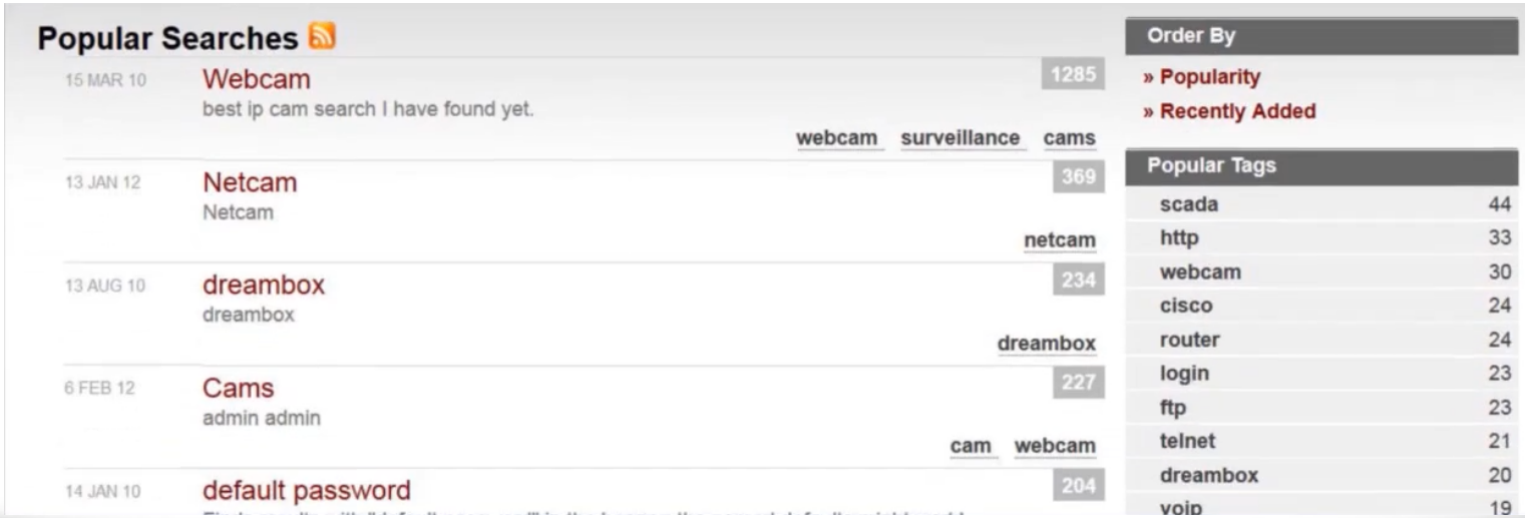
3: ????

4: PROFIT!

```
# inurl:/view.shtml
# intitle:"Live View / – AXIS" | inurl:view/view.shtml^
# inurl:ViewerFrame?Mode=
# inurl:ViewerFrame?Mode=Refresh
# inurl:axis-cgi/jpg
# inurl:view/index.shtml
# inurl:view/view.shtml
# liveapplet
# intitle:"live view" intitle:axis
# intitle:liveapplet
# allintitle:"Network Camera NetworkCamera"
# intitle:axis intitle:"video server"
# intitle:liveapplet inurl:LvAppl
# intitle:"EvoCam" inurl:"webcam.html"
# intitle:"Live NetSnap Cam-Server feed"
# intitle:"Live View / - AXIS 206M"
# intitle:"Live View / - AXIS 206W"
# intitle:"Live View / - AXIS 210?
# inurl:indexFrame.shtml Axis
# intitle:start inurl:cgistart
# intitle:"WJ-NT104 Main Page"
# intitle:snc-z20 inurl:home/
# intitle:snc-cs3 inurl:home/
# intitle:snc-rz30 inurl:home/
# intitle:"sony network camera snc-p1?
# viewnetcam.com
# intitle:"Toshiba Network Camera" user login
# intitle:"i-Catcher Console - Web Monitor"
```

SHODAN

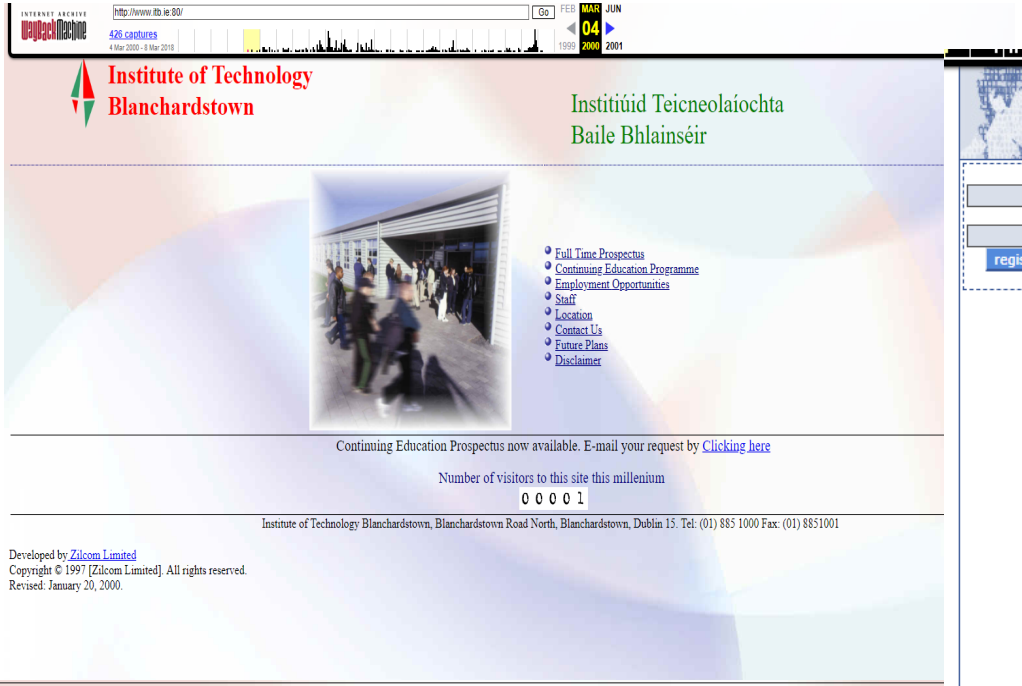


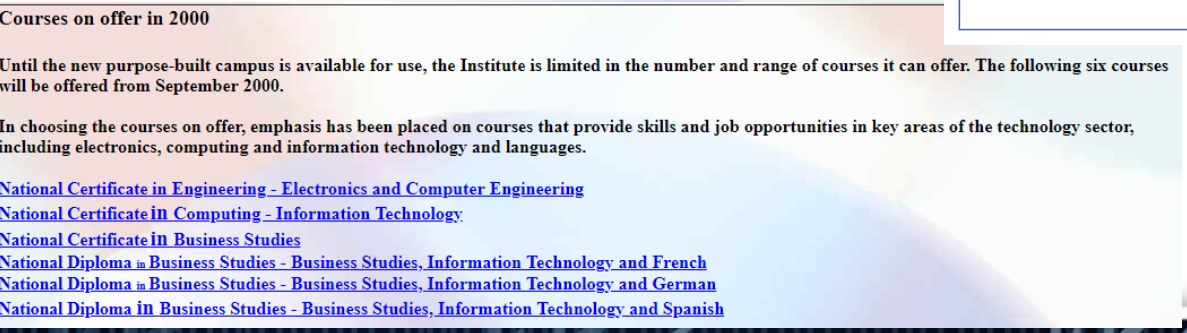


Web Archive

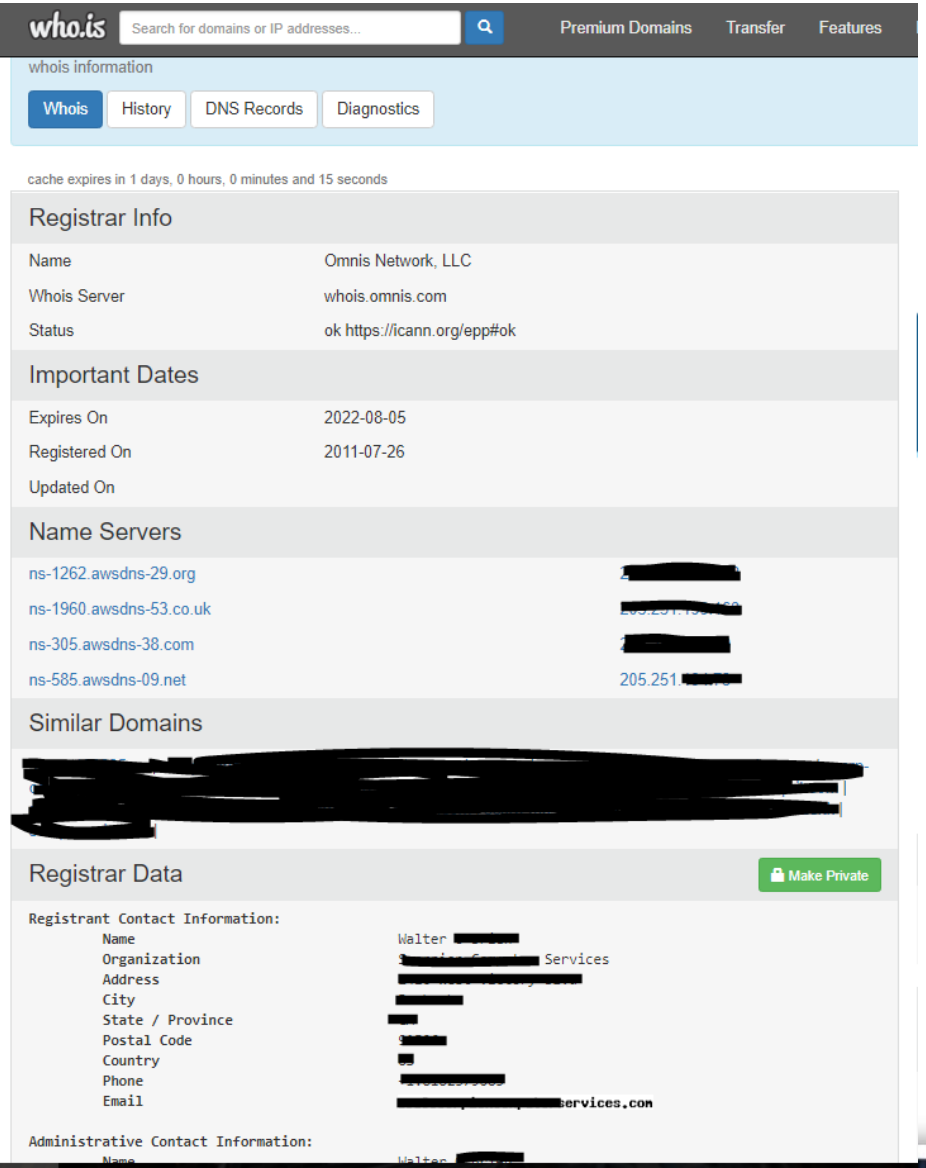
Information Gatherable

Emails, Phone Numbers, Locations, Names, Project Names





Who.is



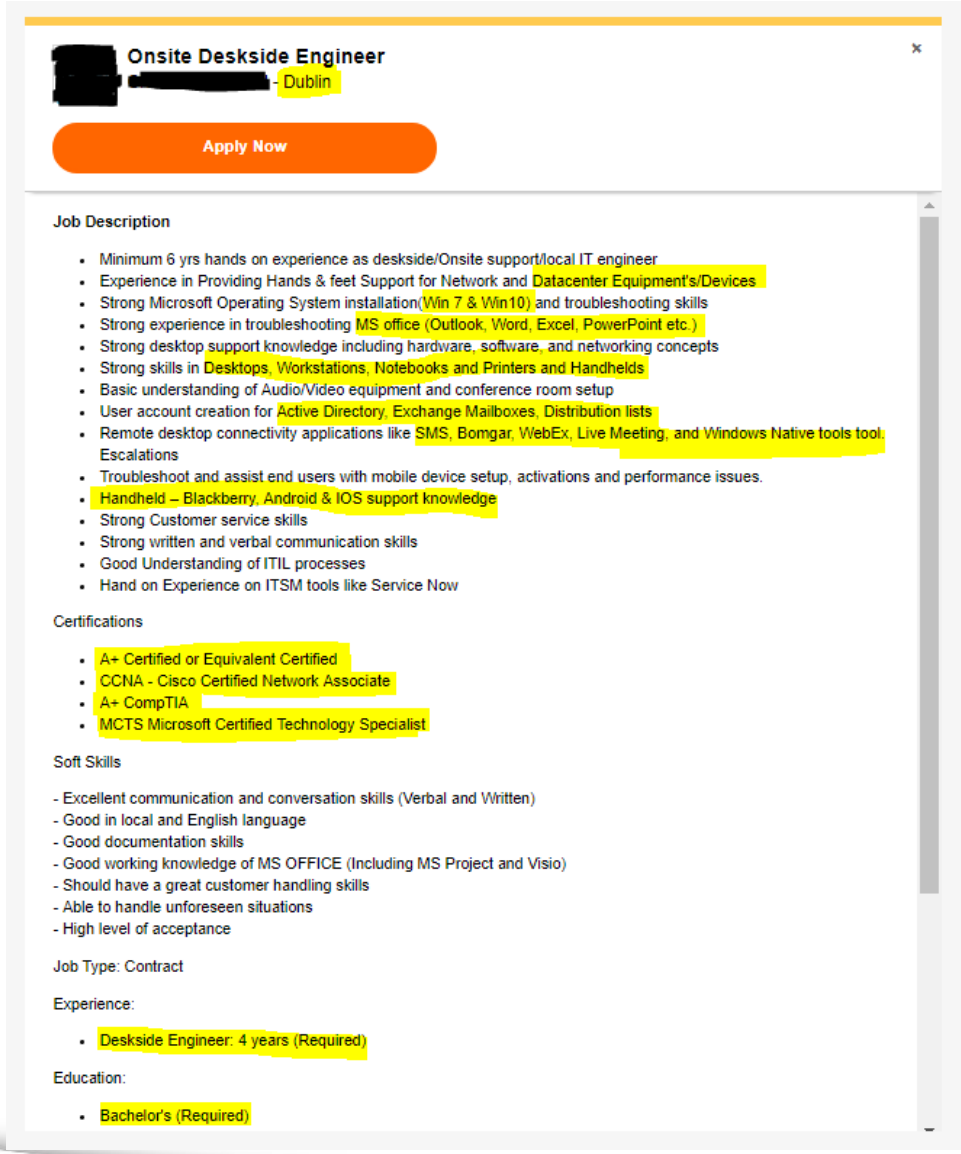
Information Gatherable

DNS Information
Names
Address
Country
Email Address
Domain Information
Phone Numbers
Server IP Address

Since 2018 is now slightly useless

DAMN GDPR

OSINT



Onsite Deskside Engineer
[redacted] - Dublin

Apply Now

Job Description

- Minimum 6 yrs hands on experience as deskside/Onsite support/local IT engineer
- Experience in Providing Hands & feet Support for Network and Datacenter Equipment's/Devices
- Strong Microsoft Operating System installation(Win 7 & Win10) and troubleshooting skills
- Strong experience in troubleshooting MS office (Outlook, Word, Excel, PowerPoint etc.)
- Strong desktop support knowledge including hardware, software, and networking concepts
- Strong skills in Desktops, Workstations, Notebooks and Printers and Handhelds
- Basic understanding of Audio/Video equipment and conference room setup
- User account creation for Active Directory, Exchange Mailboxes, Distribution lists
- Remote desktop connectivity applications like SMS, Bomgar, WebEx, Live Meeting, and Windows Native tools tool. Escalations
- Troubleshoot and assist end users with mobile device setup, activations and performance issues.
- Handheld – Blackberry, Android & IOS support knowledge
- Strong Customer service skills
- Strong written and verbal communication skills
- Good Understanding of ITIL processes
- Hand on Experience on ITSM tools like Service Now

Certifications

- A+ Certified or Equivalent Certified
- CCNA - Cisco Certified Network Associate
- A+ CompTIA
- MCTS Microsoft Certified Technology Specialist

Soft Skills

- Excellent communication and conversation skills (Verbal and Written)
- Good in local and English language
- Good documentation skills
- Good working knowledge of MS OFFICE (Including MS Project and Visio)
- Should have a great customer handling skills
- Able to handle unforeseen situations
- High level of acceptance

Job Type: Contract

Experience:

- Deskside Engineer: 4 years (Required)

Education:

- Bachelor's (Required)

Location: Dublin

Equipment: Cisco, Datacentre hardware

OS: Windows 7 & Windows 10

Hardware: Desktops, Workstations, Notebooks, Printers and Handhelds

Protocol: Active Directory, Microsoft Exchange, Remote Desktop
SMS, Bomgar, WebEx, Live Meetings.

Handheld: Android, Blackberry & IOS

Experience: 4 years + Degree

Dumpster Diving

What it says on the tin…

Physically sifting through the trash of a company

Things That Can Be Found

Internal Email address - Used for Phishing
Internal Phone Numbers – Used for Phishing
Contact Names – Used for Phishing
Old ID Cards – A lot of companies don't shred these
USB Sticks – A lot get thrown out by accident
HardDrives – Rare but sometimes contains info on prototype technology
Pages with passwords – Happens a lot

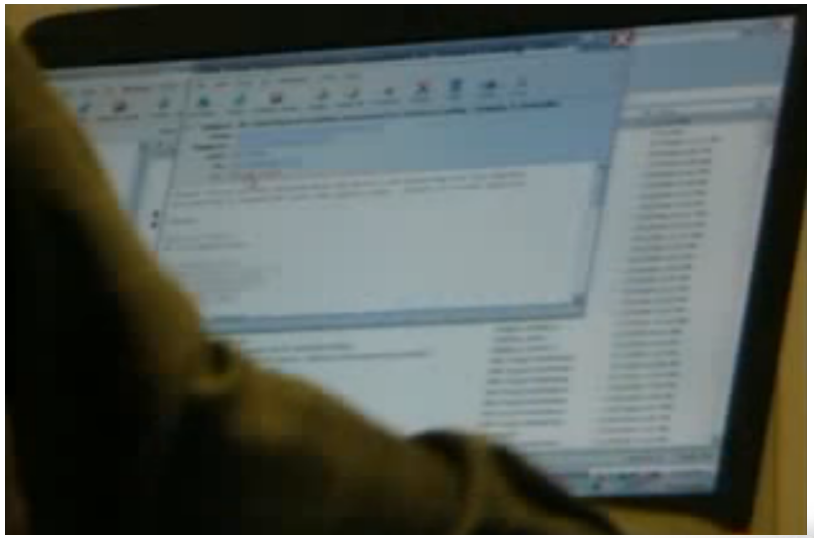
How to Stop ---- **SHRED AND BURN EVERYTHING**

Shoulder Surfing

The act of looking over someone's shoulder
!! SUPER HIGH TECH !!

During an attack on a company doing this on a targeted individual such as a system administrator, you can get info such as

Passwords
Password structure – for making wordlists
Habits – can be used for Phishing
Check their minesweeper score



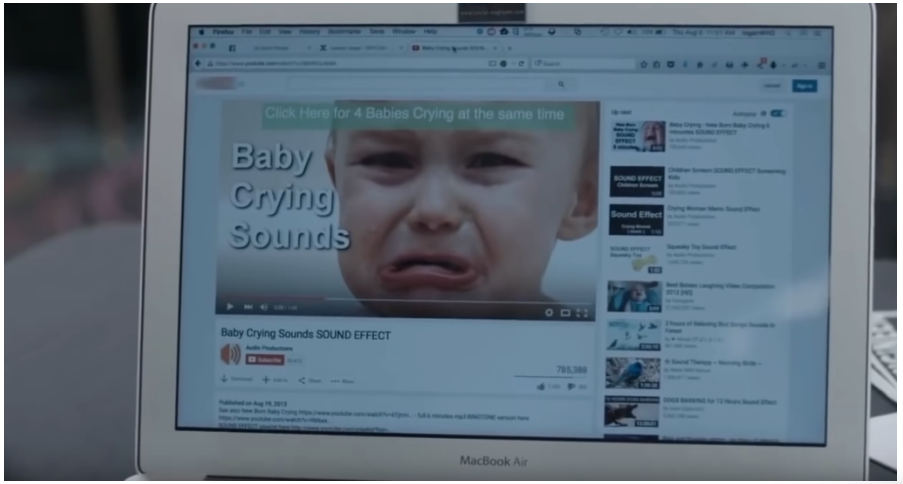
Social Engineering

This is using peoples emotions and general need to be helpful against themselves

For example calling a call line with a baby crying saying you need to transfer onto your wife who just passed away account to pay the power bill – check motherboard for similar attack on YouTube

Kevin Mitnick the Godfather of Social Engineers

- Stole top prototype technology from bell labs by asking for it



How to stop it….

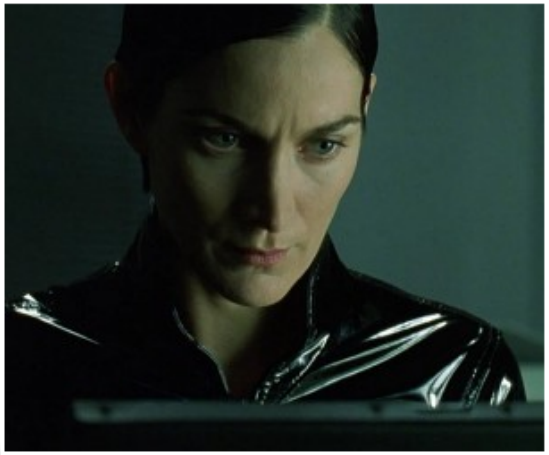
Really good staff training

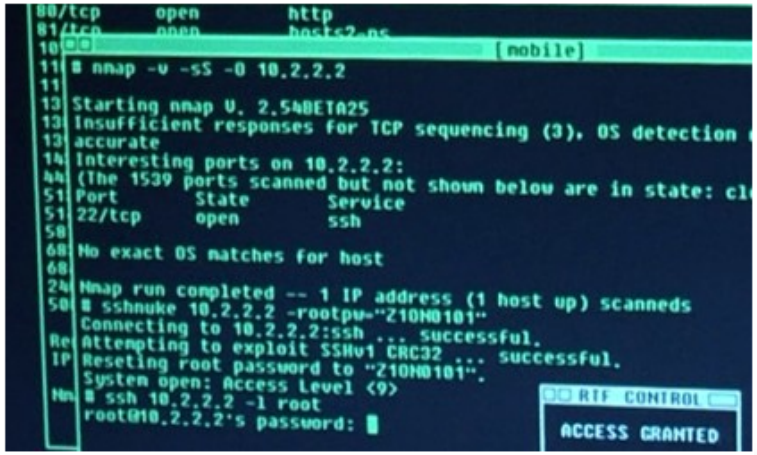
NMAP

What is Nmap?

Nmap is the world's leading port scanner, and a popular part of the pen tester’s tool kit. Nmap is a port scanner that has the ability to scan your perimeter network devices and servers from an external perspective, i.e. outside your firewall. It allows you to scan 1 IP or a range of IP addresses.

The tool has many options, some are advanced, but for the sake of introducing y’all to it we'll stick with basics that are needed to begin using it and we'll develop from that as we need in future workshops.





A Quick Glossary

Statement	Meaning
Open Port	Actively accepting TCP connections
Closed Port	Can probe but No application listening on the port
Filtered Port	Unavailable can not say its Open or Closed
Unfiltered Port	Available but unable to say Open or Closed
Open | Filtered	Can not say if port is open or filtered
Closed | Filtered	Can not say if port is closed or filtered
Passive Scanning	Non Aggressive Scan to hide scan
Verbose	Display all outputs to terminal

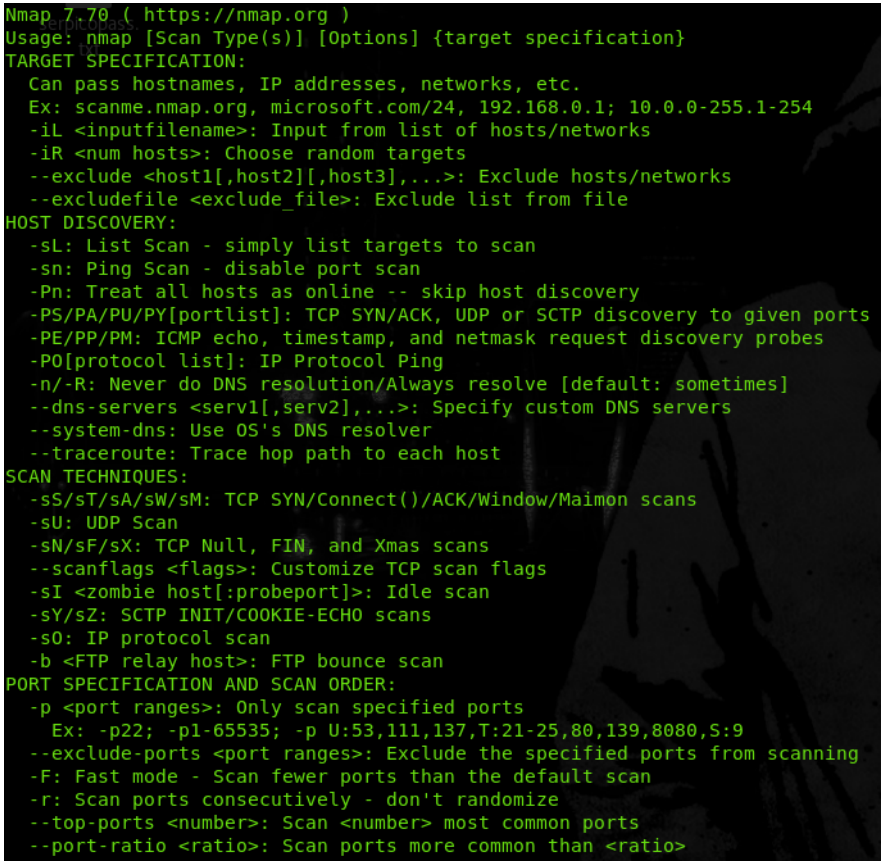
Above is a list of replies you will see from nmap that may be confusing

Running the nmap command in the console should output something like this.

root@kali:~# **nmap**

nmap -h

man nmap



As a start, the following command will run a port scan on 192.168.1.10, the **-sV** option makes nmap determine service & version information automatically, the command looks like:

nmap -sV 192.168.1.10

```
Starting Nmap 7.70 ( https://nmap.org ) at 2018-04-20 12:54 BST
Nmap scan report for 192.168.1.10
Host is up (1.0s latency).
Not shown: 993 closed ports
PORT     STATE    SERVICE         VERSION
135/tcp  open     msrpc           Microsoft Windows RPC
139/tcp  open     netbios-ssn     Microsoft Windows netbios-ssn
445/tcp  open     microsoft-ds?
514/tcp  filtered shell
902/tcp  open     ssl/vmware-auth VMware Authentication Daemon 1.10 (Uses VNC, SOAP)
912/tcp  open     vmware-auth     VMware Authentication Daemon 1.0 (Uses VNC, SOAP)
5357/tcp open     http            Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 20.59 seconds
```

From this simple scan, we can determine it is running a Windows Operating System and has a list of open ports, including 1 filtered. Nmap scanned 1000 ports, with the possibility of scanning ports 1 to 65535, and found 993 closed ports.

Let's say we want to scan for individual ports

nmap –sV –p 80 192.168.1.10

-p is the option in nmap for ports, 80 being the port number

```
Starting Nmap 7.70 ( https://nmap.org ) at 2018-04-20 13:29 BST
Nmap scan report for 192.168.1.10
Host is up (0.00061s latency).

PORT   STATE    SERVICE VERSION
80/tcp filtered http

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 2.59 seconds
```

We can also say scan for open ports online

nmap –sV –open –p– 192.168.1.10

We can use the –open option in nmap to scan for open ports, notice the **-p-** option which tells nmap to scan all 65k+ ports and list what's open.

```
Nmap scan report for 192.168.1.10
Host is up (1.0s latency).
Not shown: 65108 closed ports, 409 filtered ports
Some closed ports may be reported as filtered due to --defeat-rst-ratelimit
PORT      STATE SERVICE         VERSION
135/tcp   open  msrpc           Microsoft Windows RPC
139/tcp   open  netbios-ssn     Microsoft Windows netbios-ssn
445/tcp   open  microsoft-ds?
902/tcp   open  ssl/vmware-auth VMware Authentication Daemon 1.10 (Uses VNC, SOAP)
912/tcp   open  vmware-auth     VMware Authentication Daemon 1.0 (Uses VNC, SOAP)
5040/tcp  open  unknown
5357/tcp  open  http            Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
10801/tcp open  http            Microsoft HTTPAPI httpd 2.0 (SSDP/UPnP)
49664/tcp open  msrpc           Microsoft Windows RPC
49665/tcp open  msrpc           Microsoft Windows RPC
49666/tcp open  msrpc           Microsoft Windows RPC
49667/tcp open  msrpc           Microsoft Windows RPC
49695/tcp open  msrpc           Microsoft Windows RPC
49733/tcp open  msrpc           Microsoft Windows RPC
51000/tcp open  unknown
53213/tcp open  tcpwrapped
54247/tcp open  tcpwrapped
62086/tcp open  tcpwrapped
1 service unrecognized despite returning data. If you know the service/version, plea
```

Lets Say there is a Firewall

To scan ports Passively as not to be caught by a possible IDS or Firewall

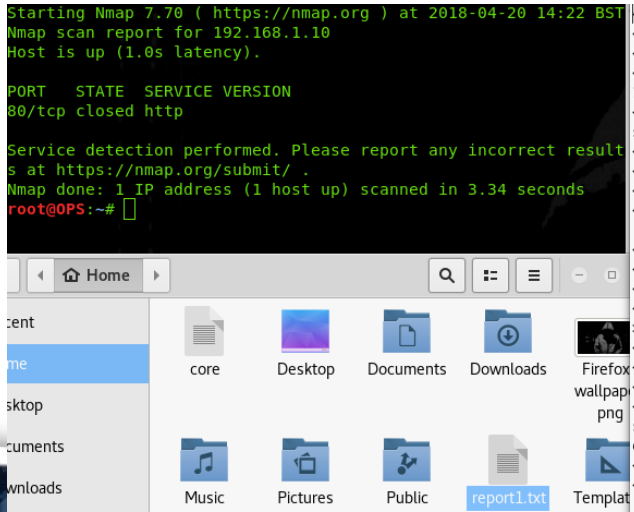
```
Starting Nmap 7.70 ( https://nmap.org ) at 2018-04-20 14:09 BST
Nmap scan report for 192.168.1.10
Host is up (1.0s latency).

PORT   STATE  SERVICE VERSION
80/tcp closed http

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 4.35 seconds
```

nmap –sV –Pn –p 80 192.168.1.10 **-Pn** treats all hosts as online

We can also save a copy of it for later reporting using -oX option




```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE nmaprun>
<?xml-stylesheet href="file:///usr/bin/../share/nmap/nmap.xsl" type="text/xsl"?>
<!-- Nmap 7.70 scan initiated Fri Apr 20 14:22:12 2018 as: nmap -sV -Pn -oX report1.txt -p 80
192.168.1.10 -->
<nmaprun scanner="nmap" args="nmap -sV -Pn -oX report1.txt -p 80 192.168.1.10" start="1524230532"
startstr="Fri Apr 20 14:22:12 2018" version="7.70" xmloutputversion="1.04">
<scaninfo type="syn" protocol="tcp" numservices="1" services="80"/>
<verbose level="0"/>
<debugging level="0"/>
<host starttime="1524230534" endtime="1524230535"><status state="up" reason="user-set"
reason_ttl="0"/>
<address addr="192.168.1.10" addrtype="ipv4"/>
<hostnames>
</hostnames>
<ports><port protocol="tcp" portid="80"><state state="closed" reason="reset" reason_ttl="128"/
><service name="http" method="table" conf="3"/></port>
</ports>
<times srtt="1001165" rttvar="1001165" to="5005825"/>
</host>
<runstats><finished time="1524230535" timestr="Fri Apr 20 14:22:15 2018" elapsed="3.34"
summary="Nmap done at Fri Apr 20 14:22:15 2018; 1 IP address (1 host up) scanned in 3.34 seconds"
exit="success"/><hosts up="1" down="0" total="1"/>
</runstats>
</nmaprun>
```

Nmap Scripts

Nmap has some powerful scripts that can be viewed with: **ls /usr/share/nmap/scripts**

```
acarsd-info.nse                 ip-forwarding.nse
address-info.nse                ip-geolocation-geoplugin.nse
afp-brute.nse                   ip-geolocation-ipinfodb.nse
afp-ls.nse                      ip-geolocation-map-bing.nse
afp-path-vuln.nse               ip-geolocation-map-google.nse
afp-serverinfo.nse              ip-geolocation-map-kml.nse
afp-showmount.nse               ip-geolocation-maxmind.nse
ajp-auth.nse                    ip-https-discover.nse
ajp-brute.nse                   ipidseq.nse
ajp-headers.nse                 ipmi-brute.nse
ajp-methods.nse                 ipmi-cipher-zero.nse
ajp-request.nse                 ipmi-version.nse
```

We can use these scripts for many tasks, such as vulnerability scanning or brute forcing, let's check for an old Netapi SMB vulnerability:

nmap --script smb-vuln-ms08-067 192.168.1.10 -n

```
Starting Nmap 7.70 ( https://nmap.org ) at 2018-04-20 14:38 BST
Nmap scan report for 192.168.1.10
Host is up (1.0s latency).
Not shown: 993 closed ports
PORT     STATE    SERVICE
135/tcp  open     msrpc
139/tcp  open     netbios-ssn
445/tcp  open     microsoft-ds
514/tcp  filtered shell
902/tcp  open     iss-realsecure
912/tcp  open     apex-mesh
5357/tcp open     wsdapi

Nmap done: 1 IP address (1 host up) scanned in 8.66 seconds
```

Most Common Nmap Options

Option	Command
Service and Version	-sV
Search by port	-p / -p 80 / -p 80-100
Search by Open / Closed	-open / -closed
Output as XML for Report	-oX
To use a script	--script
Passive Scan	-Pn
Verbose	-vv
Identify Operating System	-o
Standard Service detection	-A

There is lots more that can be found in help or on the man page.
There is also a GUI version called Zenmap.

NetDiscover

The Netdiscover tool does active/passive scanning by only leveraging the ARP protocol to discover live hosts on the network, this is more useful than ICMP based scanning, since pings can be blocked by firewalls and hosts, but ARP cannot be blocked. They are meant not to be blocked, but the tool simply can't do port scanning since it operates in Layer 2 of the OSI model.

netdiscover --help

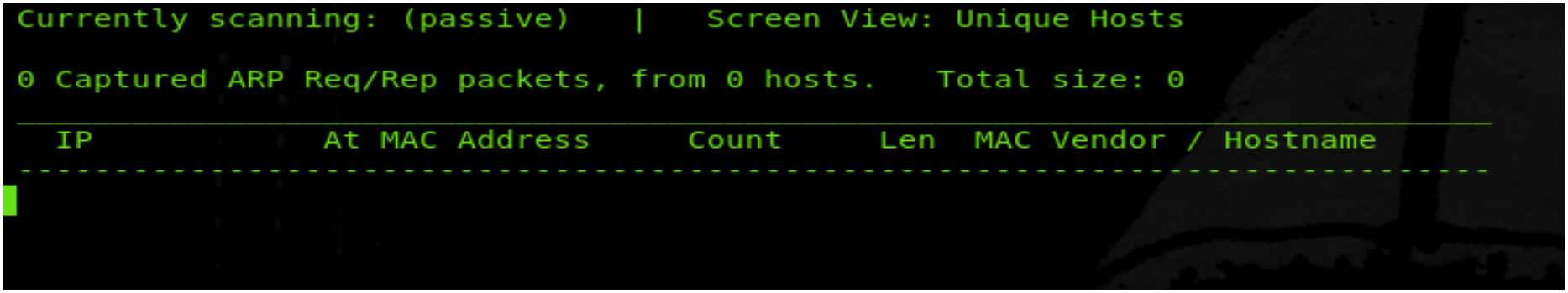
```
Netdiscover 0.3-pre-beta7 [Active/passive arp reconnaissance tool]
Written by: Jaime Penalba <jpenalbae@gmail.com>

Usage: netdiscover [-i device] [-r range | -l file | -p] [-m file] [-s time] [-n node] [-c count]
[-f] [-d] [-S] [-P] [-c]
  -i device: your network device
  -r range: scan a given range instead of auto scan. 192.168.6.0/24,/16,/8
  -l file: scan the list of ranges contained into the given file
  -p passive mode: do not send anything, only sniff
  -m file: scan the list of known MACs and host names
  -F filter: Customize pcap filter expression (default: "arp")
  -s time: time to sleep between each arp request (milliseconds)
  -n node: last ip octet used for scanning (from 2 to 253)
  -c count: number of times to send each arp reques (for nets with packet loss)
  -f enable fastmode scan, saves a lot of time, recommended for auto
  -d ignore home config files for autoscan and fast mode
  -S enable sleep time supression between each request (hardcore mode)
  -P print results in a format suitable for parsing by another program
  -N Do not print header. Only valid when -P is enabled.
  -L in parsable output mode (-P), continue listening after the active scan is completed

If -r, -l or -p are not enabled, netdiscover will scan for common lan addresses.
```

Typing **netdiscover** without arguments will simply tell the tool to do an active ARP scan (send ARP packets and sniff for replies) on all private IPv4 networks (192.168..0.0/16, 172.16.0.0/12, 10.0.0.0/8) and output something like the following. It also has a passive mode similar to nmap.

netdiscover -p



If I let the scan continue it would list the IP addresses that were available with the given options. This type of scan will take long and we're not sure we discovered all hosts on that network, since we are only listening for ARP requests/replies.

If needed, you can do a net discover within a range by using the –r option.

Netcat

Netcat (nc), also known as the TCP/IP swiss army knife, is a feature rich network utility which can be used to read and write data to network connections using TCP or UDP. But you are here to learn how to use netcat as a port scanner.

The tool acts as a quick port scanner when you're in a hurry or you are in the middle of a pentest and don't want to upload/install heavy tools like nmap as it comes pre-installed with most linux distributions, netcat has other functions useful to pen-testing we will explore in later workshops.

netcat –h

```
[v1.10-41.1]
connect to somewhere:   nc [-options] hostname port[s] [ports] ...
listen for inbound:     nc -l -p port [-options] [hostname] [port]
options:
        -c shell commands       as `-e'; use /bin/sh to exec [dangerous!!]
        -e filename             program to exec after connect [dangerous!!]
        -b                      allow broadcasts
        -g gateway              source-routing hop point[s], up to 8
        -G num                  source-routing pointer: 4, 8, 12, ...
        -h                      this cruft
        -i secs                 delay interval for lines sent, ports scanned
        -k                      set keepalive option on socket
        -l                      listen mode, for inbound connects
        -n                      numeric-only IP addresses, no DNS
        -o file                 hex dump of traffic
        -p port                 local port number
        -r                      randomize local and remote ports
        -q secs                 quit after EOF on stdin and delay of secs
        -s addr                 local source address
        -T tos                  set Type Of Service
        -t                      answer TELNET negotiation
        -u                      UDP mode
        -v                      verbose [use twice to be more verbose]
        -w secs                 timeout for connects and final net reads
        -C                      Send CRLF as line-ending
        -z                      zero-I/O mode [used for scanning]
port numbers can be individual or ranges: lo-hi [inclusive];
hyphens in port names must be backslash escaped (e.g. 'ftp\-data').
```

netcat -w 1 -n 10.0.1.21 -z 1-1000 -v

```
(UNKNOWN) [192.168.1.10] 1000 (?) : Connection timed out
(UNKNOWN) [192.168.1.10] 999 (?) : Connection timed out
(UNKNOWN) [192.168.1.10] 998 (?) : Connection timed out
(UNKNOWN) [192.168.1.10] 997 (?) : Connection timed out
(UNKNOWN) [192.168.1.10] 996 (?) : Connection timed out
(UNKNOWN) [192.168.1.10] 995 (pop3s) : Connection timed out
(UNKNOWN) [192.168.1.10] 994 (?) : Connection timed out
(UNKNOWN) [192.168.1.10] 993 (imaps) : Connection timed out
(UNKNOWN) [192.168.1.10] 992 (telnets) : Connection timed out
(UNKNOWN) [192.168.1.10] 991 (?) : Connection timed out
(UNKNOWN) [192.168.1.10] 990 (ftps) : Connection timed out
(UNKNOWN) [192.168.1.10] 988 (?) : Connection timed out
```

-z : port scanning mode
-v : verbose and show port responses
-n : No hostname resolving
-w : timeout value if port doesn't respond

MASSCAN

MASS IP PORT SCANNER

This is the fastest Internet port scanner. It can scan the entire Internet in under 6 minutes, transmitting 10 million packets per second.

It produces results similar to nmap, the most famous port scanner. It uses asynchronous transmission, The major difference is that it's faster than these other scanners. In addition, it's more flexible, allowing arbitrary address ranges and port ranges.

masscan -h

```
usage:
masscan -p80,8000-8100 10.0.0.0/8 --rate=10000
 scan some web ports on 10.x.x.x at 10kpps
masscan --nmap
 list those options that are compatible with nmap
masscan -p80 10.0.0.0/8 --banners -oB <filename>
 save results of scan in binary format to <filename>
masscan --open --banners --readscan <filename> -oX <savefile>
 read binary scan results in <filename> and save them as xml in <savefile>
```

-p [low-high][p1,p2…] : Port range or a list of ports
-i <int> : Use a specified interface, e.g. wlan0 / eth0
-n : No hostname resolution.
-Pn : No ping/host discovery before port scan.
--rate <number>: Packet amount, default is 100/s

masscan -p80,22,21,23,8080,10000 192.168.1.10 -i eth0 --rate 1000

```
Starting masscan 1.0.3 (http://bit.ly/14GZzcT) at 2018-04-20 14:38:27 GMT
 -- forced options: -sS -Pn -n --randomize-hosts -v --send-eth
Initiating SYN Stealth Scan
Scanning 1 hosts [6 ports/host]
rate:  0.00-kpps, 100.00% done, waiting -46-secs, found=0
rate:  0.00-kpps, 100.00% done, waiting -47-secs, found=0
^Zte:  0.00-kpps, 100.00% done, waiting -94-secs, found=0
```

DNSrecon

What is DNS – “Domain Name Service”
Translates domain names to IP addresses.

A lot of companies tend to run their own DNS server, attacking this can give info such as the number of servers or transfer addresses or if there are multiple IP addresses.
DNS traffic is, 90% of the time, not logged or checked.

```
root@sanctuary:~# dnsrecon -d 10101brew.com
[*] Performing General Enumeration of Domain: 10101brew.com
[-] DNSSEC is not configured for 10101brew.com
[*]      SOA dns1.registrar-servers.com 216.87.155.33
[*]      NS dns4.registrar-servers.com 216.87.152.33
[*]      NS dns1.registrar-servers.com 216.87.155.33
[*]      NS dns3.registrar-servers.com 216.87.155.33
[*]      NS dns5.registrar-servers.com 216.87.155.33
[*]      NS dns2.registrar-servers.com 216.87.152.33
[*]      MX eforward3.registrar-servers.com 38.101.213.206
[*]      MX eforward5.registrar-servers.com 38.101.213.202
[*]      MX eforward2.registrar-servers.com 209.188.18.54
[*]      MX eforward1.registrar-servers.com 38.101.213.200
[*]      MX eforward4.registrar-servers.com 69.160.33.74
[*]      A 10101brew.com 192.64.119.111
[*]      TXT 10101brew.com v=spf1 include:spf.efwd.registrar-servers.com ~all
[*] Enumerating SRV Records
[-] No SRV Records Found for 10101brew.com
[*] 0 Records Found
```

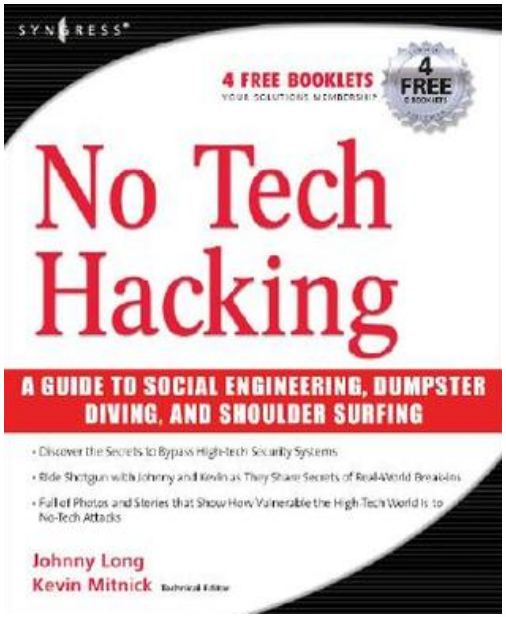
The tool to use in Kali for DNS attacks is dnsrecon.

Help command: **dnsrecon –h**

Usage: **dnsrecon –d [URL]**

Further Reading

- No Tech Hacking by Johnny Long & Kevin Mitnick
- Anything by Kevin Mitnick
- Look into 4chan “pol” V.S. HWNDU #3
- DefCon 15 - T112 - No-Tech Hacking by Johnny Long




Questions?