

Rich's lesson module checklist

Last updated 9/18/2017

- □ Slides and lab posted
- □ WB converted from PowerPoint
- $\hfill\square$ Print out agenda slide and annotate page numbers
- □ Flash cards
- Properties
- Page numbers
- □ 1st minute quiz
- □ Web Calendar summary
- Web book pages
- Commands
- □ Lab 4 posted and tested
- □ Microlab site ready
- PAN firewall adjusted for shodan
- □ pic02.jpg uploaded to website
- □ Backup slides, whiteboard slides, CCC info, handouts on flash drive
- □ Spare 9v battery for mic
- □ Key card for classroom door
- □ Update CCC Confer and 3C Media portals



Evading Network **Devices**

Cryptography

TCP/IP

Network and **Computer Attacks**

Hacking Wireless Networks

Hacking Web Servers

> Embedded Operating **Systems**

> > **Desktop and Server Vulnerabilities**

Scripting and Programming

Student Learner Outcomes

CIS 76

Ethical Hacking

1. Defend a computer and a LAN against a variety of different types of security attacks using a number of hands-on techniques.

2. Defend a computer and a LAN against a variety of different types of security attacks using a number of hands-on techniques.

Port Scanning

Footprinting and

Social Engineering

Enumeration



Introductions and Credits



Rich Simms

- HP Alumnus.
- Started teaching in 2008 when Jim Griffin went on sabbatical.
- Rich's site: http://simms-teach.com

And thanks to:

- Steven Bolt at for his WASTC EH training.
- Kevin Vaccaro for his CSSIA EH training and Netlab+ pods.
- EC-Council for their online self-paced CEH v9 course.
- Sam Bowne for his WASTC seminars, textbook recommendation and fantastic EH website (https://samsclass.info/).
- Lisa Bock for her great lynda.com EH course.
- John Govsky for many teaching best practices: e.g. the First Minute quizzes, the online forum, and the point grading system (http://teacherjohn.com/).
- Google for everything else!



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Student checklist for attending class

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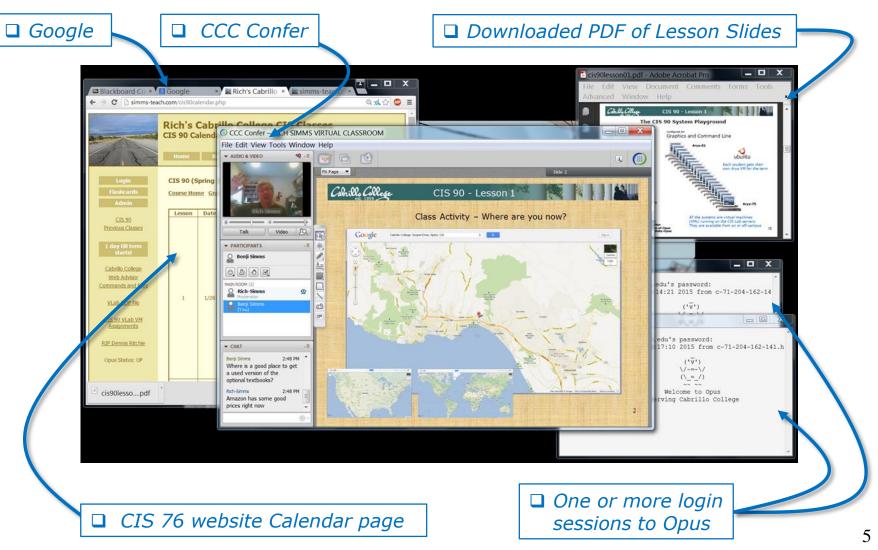
- 1. Browse to: http://simms-teach.com
- 2. Click the **<u>CIS 76</u>** link.
- 3. Click the <u>Calendar</u> link.
- 4. Locate today's lesson.
- Find the Presentation slides for the lesson and <u>download</u> for easier viewing.
- 6. Click the <u>Enter virtual classroom</u> link to join CCC Confer.
- 7. Log into Opus-II with Putty or ssh command.

Note: Blackboard Collaborate Launcher only needs to be installed once. It has already been downloaded and installed on the classroom PC's.





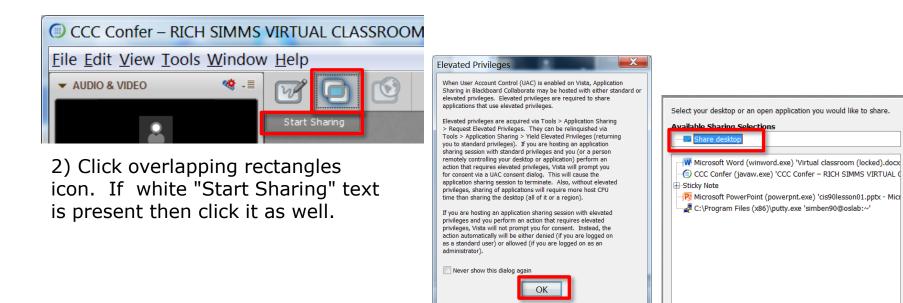
Student checklist for suggested screen layout





Student checklist for sharing desktop with classmates

1) Instructor gives you sharing privileges.



3) Click OK button.

4) Select "Share desktop" and click Share button.

Cancel

Share

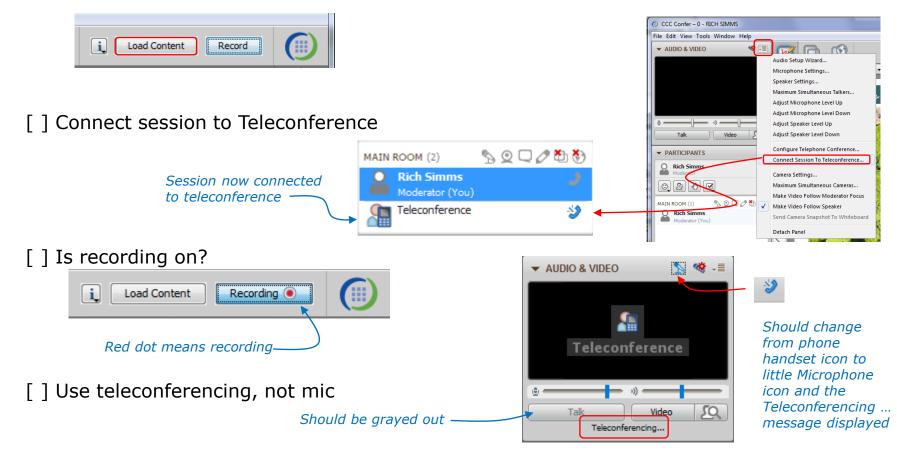




Rich's CCC Confer checklist - setup



[] Preload White Board

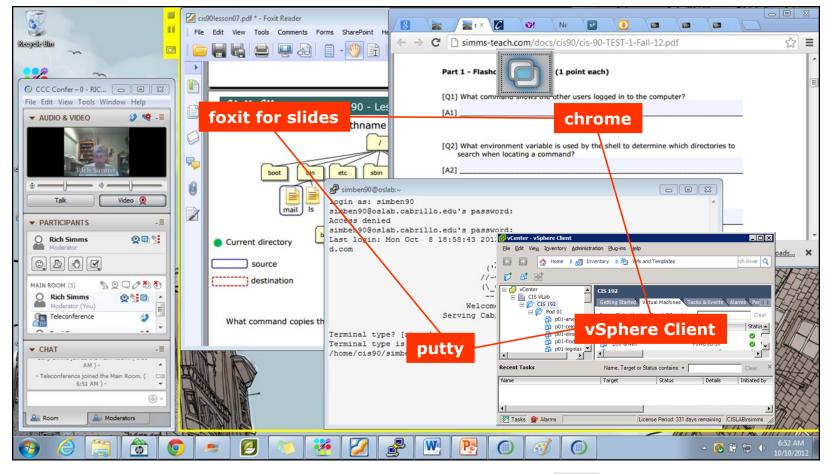






Rich's CCC Confer checklist - screen layout





[] layout and share apps

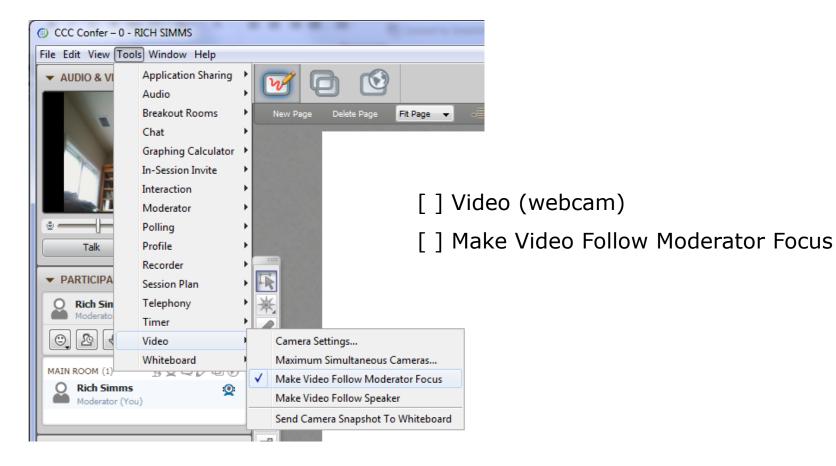






Rich's CCC Confer checklist - webcam setup

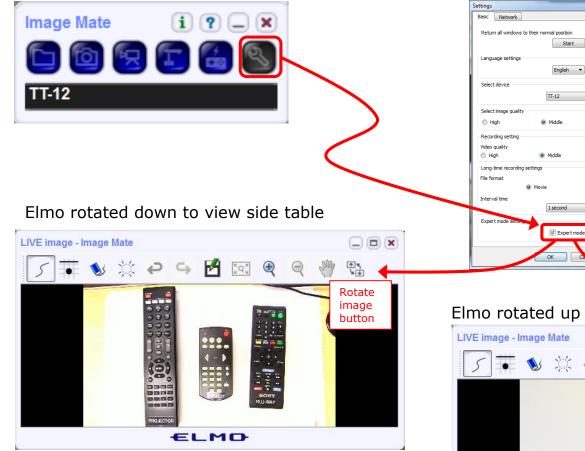




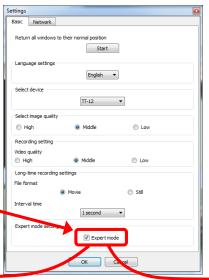




Rich's CCC Confer checklist - Elmo

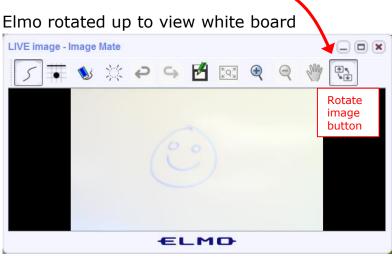


Run and share the Image Mate program just as you would any other app with CCC Confer



The "rotate image" button is necessary if you use both the side table and the white board.

Quite interesting that they consider you to be an "expert" in order to use this button!





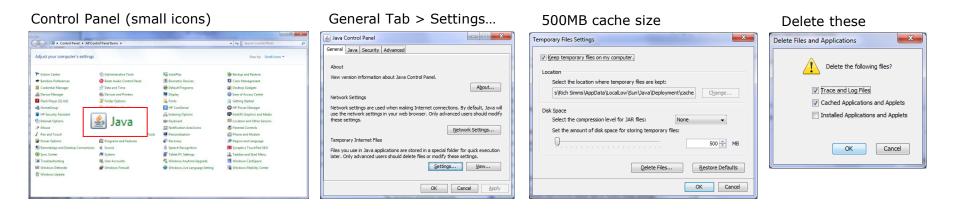




Rich's CCC Confer checklist - universal fixes

Universal Fix for CCC Confer:

- 1) Shrink (500 MB) and delete Java cache
- 2) Uninstall and reinstall latest Java runtime
- 3) http://www.cccconfer.org/support/technicalSupport.aspx



Google Java download





Start



Sound Check

Students that dial-in should mute their line using *6 to prevent unintended noises distracting the web conference.

*Instructor can use *96 to mute all student lines.*

Volume

- *4 increase conference volume.
- *7 decrease conference volume.
- *5 increase your voice volume.
- *8 decrease your voice volume.



Email me (risimms@cabrillo.edu) a relatively current photo of your face for 3 points extra credit



First Minute Quiz

Please answer these questions **in the order** shown:

Use CCC Confer White Board

email answers to: risimms@cabrillo.edu

(answers must be emailed within the first few minutes of class for credit)



Footprinting and Social Engineering

Objectives	Agenda
 Learn to use various web tools for conducting reconnaissance. Explore gathering DNS information. Try some Google Hacking. Understand what doxing is. Understand the different types of social engineering. 	 Quiz Questions Housekeeping Footprinting and Reconnaissance Social Engineering Assignment Wrap up



Admonition



Unauthorized hacking is a crime.

The hacking methods and activities learned in this course can result in prison terms, large fines and lawsuits if used in an unethical manner. They may only be used in a lawful manner on equipment you own or where you have explicit permission from the owner.

Students that engage in any unethical, unauthorized or illegal hacking may be dropped from the course and will receive no legal protection or help from the instructor or the college.



Questions



. Graded work in home directories **Questions**?

Lesson material?

Labs? Tests?

How this course works?

Who questions much, shall learn much, and retain much. - Francis Bacon

· Answers in cis90/answers

If you don't ask, you don't get. - Mahatma Gandhi

他問一個問題,五分鐘是個傻子,他不問一個問題仍然是一個 Chinese 傻瓜永遠。 Proverb He who asks a question is a fool for five minutes; he who does not ask a question remains a fool forever.



In the news



Recent news

1. MUO: Equihax: One of the Most Calamitous Breaches of All Time

http://www.makeuseof.com/tag/equifax-breach-what-happened/

Thanks Karina

2. ars TECHNICA: Failure to patch two-month-old bug led to massive Equifax breach

https://arstechnica.com/information-technology/2017/09/massiveequifax-breach-caused-by-failure-to-patch-two-month-old-bug/

3. CVE-2017-5638

http://www.cvedetails.com/cve-details.php?t=1&cve_id=CVE-2017-5638

4. Krebs: Ayuda! (Help!) Equifax Has My Data!

https://krebsonsecurity.com/2017/09/ayuda-help-equifax-has-my-data/



Recent news

1. Act Now: Hackers Hid Malware in Security App With 2 Billion Downloads

> https://www.inc.com/joseph-steinberg/act-now-hackers-hidmalware-in-security-app-with.html





If you haven't already

Change your default password on Opus-II

[simben90@opus-ii ~]\$ passwd Changing password for user simben90. Changing password for simben90. (current) UNIX password: New password: Retype new password: passwd: all authentication tokens updated successfully. [simben90@opus-ii ~]\$



Roll Call



If you are attending class by watching the recordings email the instructor at:

risimms@cabrillo.edu

to provide roll call attendance.



Housekeeping

- 1. Send me your student survey & agreement if you haven't already.
- 2. Lab 3 due by 11:59PM (Opus-II time) tonight.
- 3. Five forum posts due tonight at 11:59PM (Opus-II time).
- 4. Graded labs are placed in your home directory on Opus-II.
- 5. Answers to the quizzes are in /home/cis76/answers on Opus-II.
- 6. Grades from last week posted on the website.
- 7. When I get your survey/agreement I will send you your grading codename.



Catrillo College

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Computer Support Specialist programs

Cabrillo College: Computer and Information Systems

- 1st five post deadline is 11:59PM tonight Opus-II time! (worth 20 points)
- Only your posts in the CIS 76 forum will earn points (not the Practice forum or other classes)
- Your username must be your full first and last name to get credit on posts

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Some interesting Linux be command/examples

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Watch Star Wars using Tetnes

Lab 2 submittals

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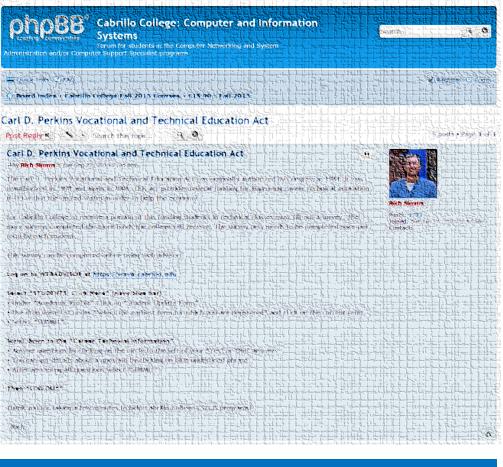
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Rich Simms



Perkins/VTEA Survey



https://opus-ii.cis.cabrillo.edu/forum/viewtopic.php?f=4&t=80

This is an important source of funding for Cabrillo College.

Send me an email stating you completed this Perkins/VTEA survey for **three points extra credit!**

Career Technical Information Your answers to these questions will help qualify Cabrillo College for Perkins/VTEA grant funds.							
Are you curr	Are you currently receiving benefits from:						
Yes TANF/CALWORKS No							
 Yes 	SSI (Supplemental Security Income)						
NO							
YesNo	GA (General Assistance)						
YesNo	Does your income qualify you for a fee waiver?						
YesNo	Are you a single parent with custody of one or more minor children?						
YesNo	Are you a displaced homemaker attending Cabrillo to develop job skills?						
YesNo	Have you moved in the preceding 36 months to obtain, or to accompany parents or spouses to obtain, temporary or seasonal employment in agriculture, dairy, or fishing?						



Wireshark Class If Interested - Enroll ASAP!

HYBRID COURSES

(part face-to-face/part online)

Course	Title	Section #	Dates	# Weeks	Campus	Day/Time	Units
CIS 140NA	Network Analysis using Wireshark	2	9/26-12/12	12	Aptos	Tue 8:00am-10:50am	3.00

CIS 140NA Network Analysis using Wireshark

Prerequisite: CIS 82 or CIS 83.

Recommended Preparation: Eligibility for ENGL 100 or ESL 100 and READ 100. Repeatability: May be taken a total of 1 time.

Teaches practical network management skills using the Wireshark network analyzer. Provides a logical troubleshooting approach to capturing and analyzing data frames. Teaches to effectively troubleshoot, maintain, optimize, and monitor network traffic. May be offered in a Distance-Learning Format.



Attack Phases



EC-Council Five Phases of Hacking

- Phase 1 Reconnaissance
- Phase 2 Scanning
- Phase 3 Gaining Access
- Phase 4 Maintaining Access
- Phase 5 Clearing Tracks



INFOSEC APT (Advanced Persistent Threat) Life Cycle

- Phase 1 Reconnaissance
- Phase 2 Spear phishing attacks
- Phase 3 Establish presence
- Phase 4 Exploration and Pivoting
- Phase 5 Data Extraction
- Phase 6 Maintaining Persistence



NSA Intrusion Phases

- 1. Reconnaissance
- 2. Initial exploitation
- 3. Establish Persistence
- 4. Install Tools
- 5. Move Laterally
- 6. Collect, "exfil", and exploit



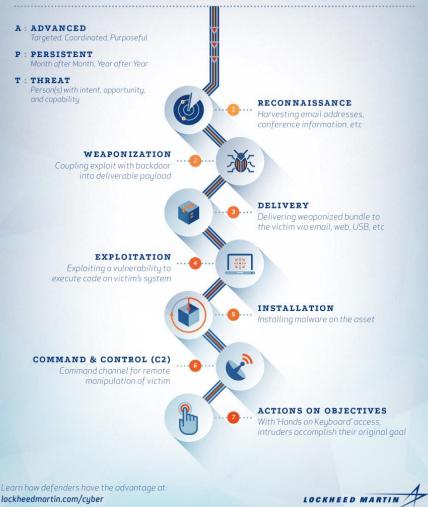
Kill Chain SANS Talk by Paul A. Henry

- 1. Initial Recon
- 2. Initial Compromise
- 3. Establish Foothold
- 4. Escalate Privileges
- 5. Internal Recon
- 6. Move Laterally (Gather PII)
- 7. Maintain Presence (Prepare for exfiltration)
- 8. Complete Mission



CYBER KILL CHAIN°

Lockheed Martin's Cyber Kill Chain^{*} and Intelligence Driven Defense^{*} services identify and prevent cyber intrusion activity. The services monitor what the adversaries must complete in order to achieve their objective.



Cyber Kill Chain Lockheed-Martin

- 1. Reconnaissance
- 2. Weaponization
- 3. Delivery
- 4. Exploitation
- 5. Installation
- 6. Command & Control (C2)
- 7. Action of Objectives

http://www.lockheedmartin.com/us/news/featu res/2014/isgs-cyber-kill-chain.html



Footprinting and



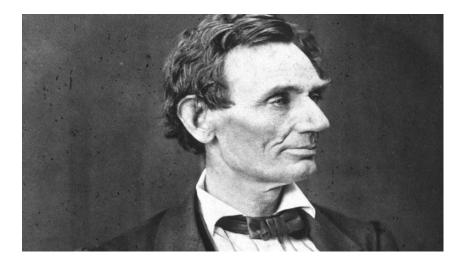
- Also known as "footprinting", "casing the joint", and "information gathering".
- The goal is to learn as much information about the target as possible without being detected.
- Gather information such as:
 - People and organizational structure
 - Related third parties
 - System and network technology used
 - Content of interest
 - Security measures
 - Physical locations and layouts



- Not covered in depth by the Netlab+ labs.
- Hard to defend against:
 - Companies need to advertise.
 - Companies need to post job openings.
 - Can't control their employees outside of work.
- Searching the Internet is a legal way to obtain information.



• One of the most time consuming phases.



If I had eight hours to chop down a tree, I'd spend the first six hours sharpening my ax.



- Active vs. Passive: Have you touched the target?
- Passive: Using methods where you will not be detected by the target.
- Semi-passive: Using methods that appear as normal Internet traffic.
- Active: port scans, vulnerability scans, testing input validation filters, searching for unpublished servers or directories.



Permanent link

Wikidata item

Cite this page

/Doxing

Print/export

Page information

3.2 Anonymous

3.4 Journalists

https://en.wikipedia.org/wiki

3.5 Curt Schilling

3.3 Human flesh search engine

CIS 76 - Lesson 4

Doxing



Personal information about people on the Internet, often including real name, known aliases, address, phone number, SSN, credit card number, etc.

"Someone dropped Bob's dox and the next day, ten pizzas and three tow trucks showed up at his house."

#lulz #owned #hacker #social engineering #ruin

http://www.urbandictionary.com/define.php?term=dox

Creating a "dossier" on someone or an organization



Domain Name System

Overview



DNS - Domain Name System

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Cabring Cabring Cabring Campus Life Campus	Search Most sought pages T	without DNS
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An Overview of Domain Name System

Created in 1983 from the work led by Paul Mockapetris Improves the deficiencies of the */etc/hosts* file DNS manages two databases (zones)

Forward lookup zones: for mapping Domain names to IP addresses Reverse lookup zones: for mapping IP addresses to Domain names Three components to DNS:

Resolver

The Server

Primary

Secondary

Caching

Database files (db.domain-name)

Supports two type of queries:

Recursive

Iterative

Most popular implementation of DNS is Berkely Internet Name Daemon (BIND) Maintained by the Internet Systems Consortium: *www.isc.org*



DNS - Forward and Reverse Lookups

Forward lookup (Name to IP address)

root@kali:~# host opus.cis.cabrillo.edu
opus.cis.cabrillo.edu is an alias for oslab.cis.cabrillo.edu.
oslab.cis.cabrillo.edu has address 207.62.187.230
oslab.cis.cabrillo.edu has IPv6 address 2607:f380:80f:f425::230
root@kali:~#

Reverse lookup (IP address to name)

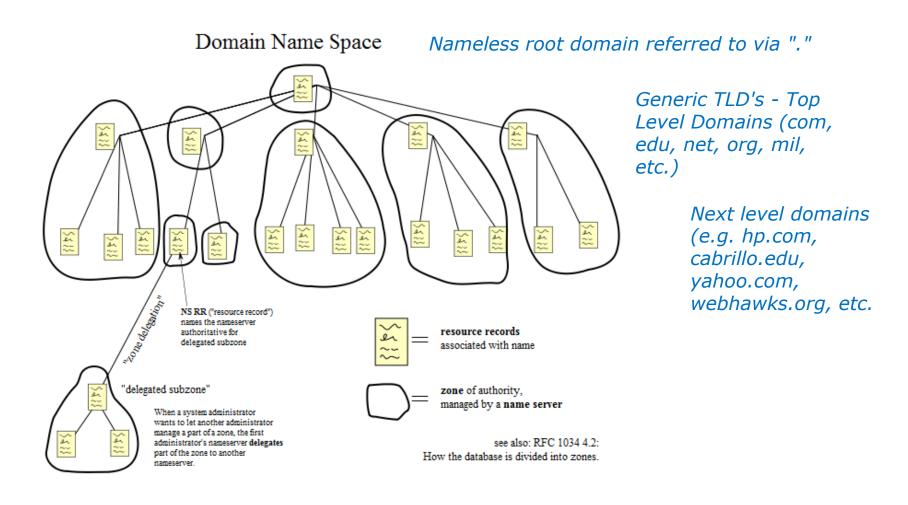
root@kali:~# host 207.62.187.230
230.187.62.207.in-addr.arpa is an alias for 230.224-27.187.62.207.inaddr.arpa.
230.224-27.187.62.207.in-addr.arpa domain name pointer
oslab.cis.cabrillo.edu.

root@kali:~# host 2607:f380:80f:f425::230
0.3.2.0.0.0.0.0.0.0.0.0.0.0.0.5.2.4.f.f.0.8.0.0.8.3.f.7.0.6.2.ip6.arpa
domain name pointer oslab.cis.cabrillo.edu.

DNS works both ways



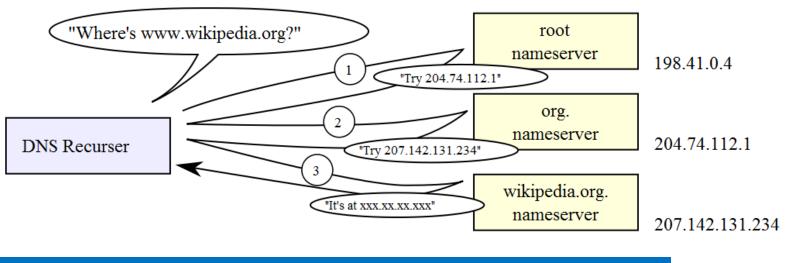
DNS - Hierarchy of authority



source: http://en.wikipedia.org/wiki/File:Domain_name_space.svg



DNS - Queries



http://en.wikipedia.org/wiki/File:An example of theoretical DNS recursion.svg

One place where recursion is often used is with the local name server on a network. Rather than making client machine resolvers perform iterative resolution, it is common for the resolver to generate a recursive request to the local DNS server, which then generates iterative requests to other servers as needed. As you can see, recursive and iterative requests can be combined in a single resolution, providing significant flexibility to the process as a whole.



DNS Database Resource Record types

- SOA Start of Authority
- NS Nameserver
- A IPv4 Address
- AAAA IPv6 Address
- PTR Pointer (for reverse lookups)
- CNAME Aliases
- MX Mail hubs
- TXT associate text strings with a name



Getting a Domain

whois command



Anyone can register a domain

🔵 DreamHost Web Panel > 🗙		≜ – □ ×
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🔍 DreamHost	g Help →	Q Search
HOME	Registrations	Contact Support
DOMAINS -		
Manage Domains	Register a New Domain	
Registrations		
Reg. Transfer	mynewdomain.com	Search
Secure Hosting		
Remap Sub-Dir	SALE .XYZ \$1.95 .CLUB \$0.99 .ONLINE \$4.95 .SITE \$3.95 .STORE \$8.95 Sale prices 1st year only. Additional years charged at regular rates. <u>See full pricing</u> .	
Anonymous FTP		
Mongrel and Proxy		
Site Statistics	Prices listed on this page are for domain registration only and do NOT include web hosting charges. Web hosting plans a renew until you end them here.	utomatically
MAIL		
GOODIES		
DREAMPRESS		
DREAM RESS		
VPS	Manage Registered Domains on "Richard's Account"	
DEDICATED SERVERS	Domain * Modify Whois? Expires Locked? Renew Now? Auto Renew?	Hosting 🗸

There is a registry of contact information for every domain registered. Often ISPs will let you use their contact information rather than your own.



Linux whois command

root@eh-kali-05: ~	•	•	0
File Edit View Search Terminal Help			
<pre>root@eh-kali-05:~# whois simms-teach.com</pre>			
Whois Server Version 2.0			
Domain names in the .com and .net domains can now be registered with many different competing registrars. Go to http://www.internic.net for detailed information.			
Domain Name: SIMMS-TEACH.COM Registrar: DREAMHOST, LLC Sponsoring Registrar IANA ID: 431 Whois Server: whois.dreamhost.com Referral URL: http://www.DreamHost.com			
Name Server: NS1.DREAMHOST.COM Name Server: NS2.DREAMHOST.COM Name Server: NS3.DREAMHOST.COM Status: clientTransferProhibited https://icann.org/epp#clientTransferProhibited Updated Date: 16-may-2016 Creation Date: 15-may-2008 Expiration Date: 15-may-2017			
>>> Last update of whois database: Sun, 18 Sep 2016 21:28:15 GMT <<<			
For more information on Whois status codes, please visit https://icann.org/epp			
NOTICE: The expiration date displayed in this record is the date the registrar's sponsorship of the domain name registration in the registry is currently set to expire. This date does not necessarily reflect the expiration date of the domain name registrant's agreement with the sponsoring registrar. Users may consult the sponsoring registrar's Whois database to view the registrar's reported date of expiration for this registration.			
TERMS OF USE: You are not authorized to access or query our Whois database through the use of electronic processes that are high-volume and automated except as reasonably necessary to register domain names or modify existing registrations; the Data in VeriSign Global Registry Services' ("VeriSign") Whois database is provided by VeriSign for information purposes only, and to assist persons in obtaining information			*

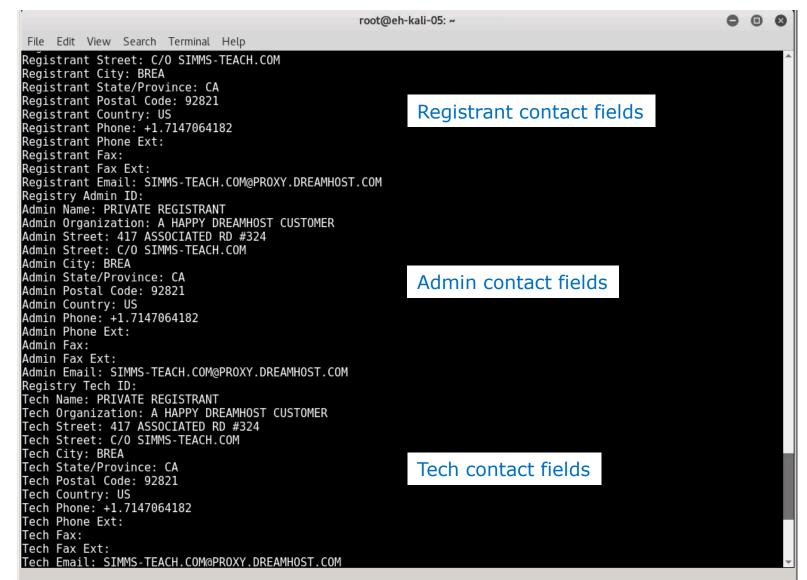


Linux whois command

root@eh-kali-05: ~	0	•	8
File Edit View Search Terminal Help			
information purposes only, and to assist persons in obtaining information about or related to a domain name registration record. VeriSign does not guarantee its accuracy. By submitting a Whois query, you agree to abide by the following terms of use: You agree that you may use this Data only for lawful purposes and that under no circumstances will you use this Data to: (1) allow, enable, or otherwise support the transmission of mass unsolicited, commercial advertising or solicitations via e-mail, telephone, or facsimile; or (2) enable high volume, automated, electronic processes that apply to VeriSign (or its computer systems). The compilation, repackaging, dissemination or other use of this Data is expressly prohibited without the prior written consent of VeriSign. You agree not to use electronic processes that are automated and high-volume to access or query the Whois database except as reasonably necessary to register domain names or modify existing registrations. VeriSign reserves the right to restrict your access to the Whois database in its sole discretion to ensure operational stability. VeriSign may restrict or terminate your access to the Whois database for failure to abide by these terms of use. VeriSign reserves the right to modify these terms at any time.			
The Registry database contains ONLY .COM, .NET, .EDU domains and Registrars. Domain Name: SIMMS-TEACH.COM			
Registry Domain ID: 1472785313_DOMAIN_COM-VRSN Registrar WHOIS Server: whois.dreamhost.com Registrar URL: www.dreamhost.com Updated Date: 2016-05-17T00:43:20.00Z Creation Date: 2008-05-15T11:21:10.00Z Perioters Desistration Date: 2017_05_15T18:21:10.00Z			
Registrar Registration Expiration Date: 2017-05-15T18:21:10.00Z Registrar: DREAMHOST Registrar IANA ID: 431 Domain Status: clientTransferProhibited https://www.icann.org/epp#clientTransferProhibited Registry Registrant ID: Registrant Name: PRIVATE REGISTRANT Registrant Organization: A HAPPY DREAMHOST CUSTOMER			
Registrant Street: 417 ASSOCIATED RD #324 Registrant Street: C/O SIMMS-TEACH.COM	S		-

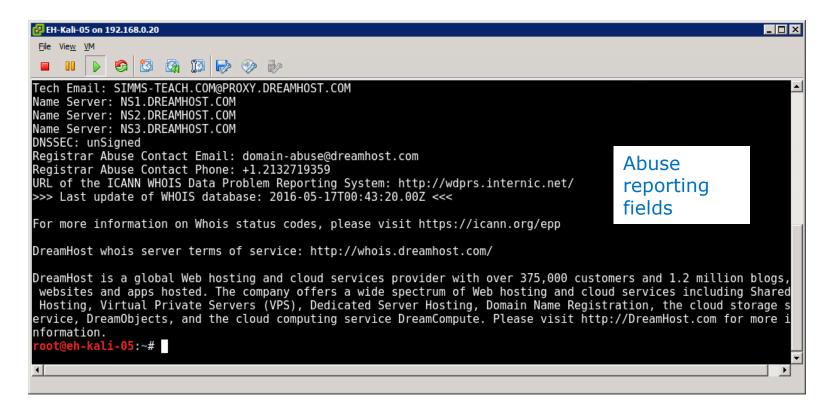


Linux whois command





Linux whois command



One of the fields can be use to report abuse coming from hosts on the domain.



Activity

Using only the **whois** command see if you can find two contacts at Beloit College in Wisconsin.

Write their first names into the chat window.



Domain Information

whois.icann.org



http://whois.icann.org

	简体中文 <u>English</u> Français Py	сский Español الحريبة Portuguese	
ICANN WHOIS	ABOUT WHOIS	GET WH POLICIES INVOLVED COMP	IOIS KNOWLEDGE LAINTS CENTER
simms-teach.com	Lookup		
Showing results for: SIMMS-T			
Original Query: simms-teach.com		Tach Contact	Submit a Complaint for WHOIS WHOIS Inaccuracy Complaint Form WHOIS Service Complaint Form WHOIS Compliance FAQs
Contact Informatic Registrant Contact Name: PRIVATE REGISTRANT Organization: A HAPPY DREAMHOST CUSTOMER Mailing Address: 417 ASSOCIATED RD #324, BREA CA 92821 US	Admin Contact Name: PRIVATE REGISTRANT Organization: A HAPPY DREAMHOST CUSTOMER Mailing Address: 417 ASSOCIATED RD #324, BREA CA 92821 US	92821 US	WHOIS Inaccuracy Complaint Form WHOIS Service Complaint Form
Contact Informatic Registrant Contact Name: PRIVATE REGISTRANT Organization: A HAPPY DREAMHOST CUSTOMER Mailing Address: 417 ASSOCIATED RD #324, BREA CA	Admin Contact Name: PRIVATE REGISTRANT Organization: A HAPPY DREAMHOST CUSTOMER Mailing Address: 417 ASSOCIATED RD #324, BREA CA	Name: PRIVATE REGISTRANT Organization: A HAPPY DREAMHOST CUSTOMER Mailing Address: 417 ASSOCIATED RD #324, BREA CA	WHOIS Inaccuracy Complaint Form WHOIS Service Complaint Form

Provides a web interface for getting whois information



http://whois.icann.org

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⊂ → C	https://whois.icann.org/en/lookup?name=simms-teach.com				☆	:
	simms-teach.com					•
	Registrar WHOIS Server: whois.dreamhost.com URL: www.dreamhost.com Registrar: DREAMHOST IANA ID: 431 Abuse Contact Email:domain- abuse@dreamhost.com Abuse Contact Phone: +1.2132719359	Status Domain Status:clientTransferProhibited https://www.icann.org/epp#clientTransferProhibited				
	Important Dates Updated Date: 2016-05-17 Created Date: 2008-05-15 Registration Expiration Date: 2017-05-15	Name Servers NS1.DREAMHOST.COM NS2.DREAMHOST.COM NS3.DREAMHOST.COM				
	Raw WHOIS Record Domain Name: SIMMS-TEACH.COM Registry Domain ID: 1472785313_DOMAIN_COM-VRSH Registrar WHOIS Server: whois.dreamhost.com Updated Date: 2016-05-17T00:43:20.00Z Creation Date: 2008-05-15T11:21:10.00Z Registrar Registration Expiration Date: 2017-0 Registrar IANA ID: 431 Domain Status: clientTransferProhibited https://www.icann.org/epp#clientTransferProhil Registry Registrant ID:	95-15T18:21:10.00Z				Ţ



http://whois.icann.org

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÷ → C	https://whois.icann.org/en/lookup?name=simms-teach.com		\$:
	simms-teach.com				
	Registry Registrant ID:				
	Registrant Name: PRIVATE REGISTRANT				
	Registrant Organization: A HAPPY DREAMHOST CUSTOMER				
	Registrant Street: 417 ASSOCIATED RD #324				
	Registrant Street: C/O SIMMS-TEACH.COM				
	Registrant City: BREA				
	Registrant State/Province: CA				
	Registrant Postal Code: 92821 Registrant Country: US				
	Registrant Phone: +1.7147064182				
	Registrant Phone Ext:				
	Registrant Fax:				
	Registrant Fax Ext:				
	Registrant Email: SIMMS-TEACH.COM@PROXY.DREAMHOST.COM				
	Registry Admin ID:				
	Admin Name: PRIVATE REGISTRANT				
	Admin Organization: A HAPPY DREAMHOST CUSTOMER				
	Admin Street: 417 ASSOCIATED RD #324				
	Admin Street: C/O SIMMS-TEACH.COM				
	Admin City: BREA				
	Admin State/Province: CA				
	Admin Postal Code: 92821				
	Admin Country: US				
	Admin Phone: +1.7147064182				
	Admin Phone Ext:				
	Admin Fax:				
	Admin Fax Ext:				
	Admin Email: SIMMS-TEACH.COM@PROXY.DREAMHOST.COM				
	Registry Tech ID:				
	Tech Name: PRIVATE REGISTRANT				
	Tech Organization: A HAPPY DREAMHOST CUSTOMER				
	Tech Street: 417 ASSOCIATED RD #324				
	Tech Street: C/O SIMMS-TEACH.COM				
	Tech City: BREA				
	Tech State/Province: CA				
	Tech Postal Code: 92821				
	Tech Country: US				
	Tech Phone: +1.7147064182				
	Tech Phone Ext:				
	Tech Fax:				
	Tech Fax Fyt.				



http://whois.icann.org

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é ⇒ c	https://whois.icann.org/en/lookup?name=simms-teach.com			☆ 🖸	:
	simms-teach.com				*
	<pre>Tech Fax: Tech Fax Ext: Tech Faxi: Tech Email: SIMMS-TEACH.COM@PROXY.DREAMHOST.COM Name Server: NS1.DREAMHOST.COM Name Server: NS3.DREAMHOST.COM DNSSEC: unSigned Registrar Abuse Contact Email: domain-abuse@dreamhost.com Registrar Abuse Contact Phone: +1.2132719359 URL of the ICANN WHOIS Data Problem Reporting System: http://wdprs.internic.net/ >>> Last update of WHOIS database: 2016-05-17T00:43:20.00Z <<</pre> For more information on Whois status codes, please visit https://icann.org/epp DreamHost whois server terms of service: http://whois.dreamhost.com/ DreamHost is a global Web hosting and cloud services provider with over 375,000 customers and 1.2 million blogs, websites and apps hosted. The company offers a wide spectrum of Web hosting and cloud services including Shared Hosting, Virtual Private Servers (VPS), Dedicated Server Hosting, Domain Name Registration, the cloud storage service, DreamHost.com for more information.				
	NOTICE, DISCLAIMERS AND TERMS OF USE:				
	All results shown are captured from registries and/or registrars and are framed in real-time. ICANN does not generate shown other than for the transitory duration necessary to show these results in response to real-time queries.* These purpose of assisting you in obtaining information about domain name registration records and for no other purpose. Ye lawful purposes and further agree not to use this data (i) to allow, enable, or otherwise support the transmission by em unsolicited, commercial advertising, or (ii) to enable high volume, automated, electronic processes to collect or compile without limitation mining this data for your own personal or commercial purposes. ICANN reserves the right to restrict if you fail to abide by these terms of use. ICANN reserves the right to modify these terms at any time. By submitting a terms.	results are shown for the sole ou agree to use this data only nail, telephone, or facsimile of e this data for any purpose, in or terminate your access to th	for mass cluding ie data		
	* There is one exception: ICANN acts as the registry operator for the .int TLD, and in that capacity it does collect, ger regarding registrations in the .int TLD.	nerate, retain and store inform	ation		
	© 2016 Internet Corporation for Assigned Names and Numbers Privacy Policy				-



Activity

Using only:

http://whois.icann.org

See if you can find a technical contact for the simms-teach.com domain.

What is the email address for the Technical Contact?

Put your answer in the chat window



Domain Information

Domain Dossier



centralops.net

Yahoo 📙 Cabri	et/co/ lo College 🔄 Health 🔜 Network 🔜 Medical 📮 CIS 76 links 📃 Lab De	velopment 📙 Home 📙 Music 🗋 Expand All 🔅 🗌 Other bo
ntral Ope	5 .net Advanced online Internet utilities	a service of :Hex
		Utilities V
es ain Dossier ain Check I Dossier ser Mirror	Free online network tools	user: anonymous [71.198.222.56] balance: 35 units log in account info
eroute okup	Tools	How this site works
Whois /zePath	Domain Dossier Investigate domains and IP addresses. Get registrant information, DNS records, and more—all in one report. enter a domain or IP address or learn about yourself Domain Check See if a domain is available for registration. Email Dossier Validate and troubleshoot email addresses. Browser Mirror See what your browser reveals about you.	The tools at CentralOps.net are free for everyday , interactive use—no login required. Simply pick a tool on the left and use it. As an anonymous user, you get 50 free service units every 24 hours. Whenever you use one of the tools, its cost in service units is deducted from your balance. If you balance runs out, you will get more free units at the end the 24-hour period. The free units are more than enough for 99% of our users, but if you want extended or automated use of our tools, paid accounts are available .
	Ping See if a host is reachable.	
	Traceroute Trace the network path from this server to another.	
	NsLookup Look up various domain resource records with this version	of the classic NsLookup utility.
	AutoWhois	

Free online anonymous tools

Click on the Domain Dossier link on the left panel

http://centralops.net/co



http://centralops.net/co/domaindossier.aspx

	Θ	-		×	:
✓ III simms-teach.com - Dom: × ← → C ① centralops.net/co/domaindossier.aspx		☆		ABP	:
Apps X Yahoo Gabrillo College Health Network Medical CIS 76 links Lab Development Home Music The Expand All The Link Comments			_	okmark	•
Domain Dossier Investigate domains and IP addresses					^
domain or IP address simms-teach.com					
✓ domain whois record ✓ DNS records ✓ traceroute					
🗹 network whois record 🗹 service scan 🧐					
user: anonymous [71.198.222.56] balance: 44 units log in account info					
Address lookup The Domain Dossi					
canonical name simms-teach.com. provides whois info	0.				
aliases	- /				
Domain Whois record information					
Queried whois.internic.net with "dom simms-teach.com"					
Domain Name: SIAMS-TEACH.COM Registry Domain ID: 1472785313_DOMAIN_COM-VRSN Registrar WRDIS Server: whois dreamhost.com Registrar URL: http://www.DreamHost.com Updateed Date: 2010-05-157018:522 Creation Date: 2008-05-15718:21:102 Registrar IDate: 2018-05-15718:21:102 Registrar IDate: 1018-05-15718:21:102 Registrar Abuse Contact Phone: Domain Status: clientTransferProhibited https://icann.org/epp#clientTransferProhibited Name Server: NS2.DREAMHOST.COM Name Server: NS2.DREAMHOST.COM Name Server: NS2.DREAMHOST.COM Name Server: NS2.DREAMHOST.COM Name Server: NS2.DREAMHOST.COM Name Server: NS2.DREAMHOST.COM Name Server: NS2.DREAMHOST.COM					
Queried whois.dreamhost.com with "simms-teach.com"					
Domain Name: SIMMS-TEACH.COM Registry Domain ID: 1472785315_DOMAIN_COM-VRSN Registrar WRDIS Server: whois.dreamhost.com Updated Date: 2017-05-17T0128:06.002 Creation Date: 2008-05-15T11:11.10.002 Registrar Registration Expiration Date: 2018-05-15T18:21:10.00Z Registrar: DREAMHOST Registrar IANA ID: 431					•



Activity

Using the Domain Dossier website:

http://centralops.net/co/domaindossier.aspx

See if you can find the administrative contact for the mit.edu domain.

Put their first name and the phone number in the chat window





host & nslookup commands

Forward and reverse DNS lookups



host command

P rsimms@oslab:~	_	×
NAME		^
host - DNS lookup utility		
SYNOPSIS		
host [-aCdlnrsTwv] [-c <u>class</u>] [-N <u>ndots]</u> [-R <u>number]</u> [-t <u>type]</u> [-W <u>wait</u>] [-m <u>flag</u>] [-4] [-6] {name} [server]		
DESCRIPTION		
host is a simple utility for performing DNS lookups. It is normally used to convert names to IP addresses and vice versa. When no arguments or options are given, host prints a short summary of its command line arguments and options.		
<u>name</u> is the domain name that is to be looked up. It can also be a dotted-decimal IPv4 address or a colon-delimited IPv6 address, in which case host will by default perform a reverse lookup for that address. <u>server</u> is an optional argument which is either the name or IP address of the name server that host should query instead of the server or servers listed in <u>/etc/resolv.conf</u> .		*

Easy to use Linux command for resolving names or IP addresses



host command on Linux

Forward lookup

[rsimms@oslab ~]\$ host www.google.com
www.google.com has address 216.58.193.196
www.google.com has IPv6 address 2607:f8b0:4007:80b::2004
[rsimms@oslab ~]\$

Reverse lookup

[rsimms@oslab ~]\$ host 216.58.193.196
196.193.58.216.in-addr.arpa domain name pointer lax02s23-in-f4.1e100.net.
196.193.58.216.in-addr.arpa domain name pointer lax02s23-in-f196.1e100.net.
[rsimms@oslab ~]\$



host command on Linux

root@kali:~# host opus.cis.cabrillo.edu nsl.cis.cabrillo.edu
Using domain server:
Name: nsl.cis.cabrillo.edu
Address: 2607:f380:80f:f425::252#53
Aliases:

opus.cis.cabrillo.edu is an alias for oslab.cis.cabrillo.edu. oslab.cis.cabrillo.edu has address 207.62.187.230 oslab.cis.cabrillo.edu has IPv6 address 2607:f380:80f:f425::230 root@kali:~# Specifying a specific name server to do the name resolution

root@kali:~# host opus.cis.cabrillo.edu ns2.cis.cabrillo.edu
Using domain server:
Name: ns2.cis.cabrillo.edu
Address: 2607:f380:80f:f425::253#53
Aliases:

opus.cis.cabrillo.edu is an alias for oslab.cis.cabrillo.edu. oslab.cis.cabrillo.edu has address 207.62.187.230 oslab.cis.cabrillo.edu has IPv6 address 2607:f380:80f:f425::230 root@kali:~#



nslookup command on Windows

Forward lookup

C:\Users\rich>**nslookup opus-ii.cis.cabrillo.edu** Server: router.asus.com Address: 192.168.1.1

Non-authoritative answer: Name: opus-ii.cis.cabrillo.edu Addresses: 2607:f380:80f:f425::244 207.62.187.244

Reverse lookup

C:\Users\rich>**nslookup 207.62.187.244** Server: router.asus.com Address: 192.168.1.1 Name: opus-ii.cis.cabrillo.edu Address: 207.62.187.244

Aliases: 244.187.62.207.in-addr.arpa



Activity

Using the host command to do a forward lookup on:

simms-teach.com

Put the IP address in the chat window



Activity

Using the host command to do a reverse lookup on:

208.113.154.64

What ISP am I hosting my website on?

Put your answer in the chat window



Domain Records

dig



dig command

🛃 rsimms	@opus-ii:~	- 🗆	×
DIG(1)	BIND9	DIG(1)	^
NAME	dig - DNS lookup utility		
SYNOPS	IS dig [@server] [-b <u>address</u>] [-c <u>class]</u> [-f <u>filename</u>] [-k <u>filename</u>] [-m] [-p <u>port#</u>] [-q <u>name</u>] [-t <u>;</u> [-x <u>addr</u>] [-y <u>[hmac:]name:key</u>] [-4] [-6] [name] [type] [class] [queryopt]	type]	
	dig [-h]		
	dig [global-queryopt] [query]		
DESCRI	PTION dig (domain information groper) is a flexible tool for interrogating DNS name servers. It perform lookups and displays the answers that are returned from the name server(s) that were queried. Most administrators use dig to troubleshoot DNS problems because of its flexibility, ease of use and of output. Other lookup tools tend to have less functionality than dig.	st DNS	7
	Although dig is normally used with command-line arguments, it also has a batch mode of operation reading lookup requests from a file. A brief summary of its command-line arguments and options is printed when the -h option is given. Unlike earlier versions, the BIND 9 implementation of dig a multiple lookups to be issued from the command line.	s	
	Unless it is told to query a specific name server, dig will try each of the servers listed in /etc/resolv.conf. If no usable server addreses are found, dig will send the query to the local h	ost.	
	When no command line arguments or options are given, dig will perform an NS query for "." (the r	oot).	
	It is possible to set per-user defaults for dig via \${HOME}/.digrc. This file is read and any op in it are applied before the command line arguments.	tions	
Manua	l page dig(1) line 1 (press h for help or q to quit)		~



Find domain name servers

dig ns cis.cabrillo.edu

<pre>root@eh-kali-05:~# dig ns cis.cabrillo.edu</pre>						
; <<>> DiG 9.10.3-P4-Debian <<>> ns cis.cabrillo.edu ;; global options: +cmd ;; Got answer: ;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 17839 ;; flags: qr aa rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 5						
;; OPT PSEUDOSECTION: ; EDNS: version: 0, flags:; udp: 4096 ;; QUESTION SECTION:						
;cis.cabrillo.edu.		IN	NS			
;; ANSWER SECTION: cis.cabrillo.edu. cis.cabrillo.edu.	86400 86400	IN IN	NS NS	ns2.cis.cabrillo.edu. ns1.cis.cabrillo.edu.		
;; ADDITIONAL SECTION: ns1.cis.cabrillo.edu. ns1.cis.cabrillo.edu. ns2.cis.cabrillo.edu. ns2.cis.cabrillo.edu.	86400	IN IN IN IN	A AAAA A AAAA			
;; Query time: 2 msec ;; SERVER: 172.30.5.101; ;; WHEN: Sun Sep 18 15:: ;; MSG SIZE rcvd: 169)			
root@eh-kali-05:~#						

Finding the name servers (ns records) for the cabrillo.edu domain



Find domain mail servers

dig mx cis.cabrillo.edu

<pre>root@eh-kali-05:~# dig</pre>	mx cis.c	abrillo.	edu				
; <<>> DiG 9.10.3-P4-Debian <<>> mx cis.cabrillo.edu ;; global options: +cmd ;; Got answer: ;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 61468 ;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 7							
<pre>;; OPT PSEUDOSECTION: ; EDNS: version: 0, flag; ;; QUESTION SECTION: ;cis.cabrillo.edu.</pre>	gs:; udp	: 4096 IN	МХ				
;; ANSWER SECTION: cis.cabrillo.edu.	86400	IN	MX	10 oslab.cis.cabrillo.edu.			
;; AUTHORITY SECTION: cis.cabrillo.edu. cis.cabrillo.edu.	86400 86400	IN IN	NS NS	nsl.cis.cabrillo.edu. ns2.cis.cabrillo.edu.			
	86400	IN IN IN IN IN IN	A AAAA A AAAA A AAAA	172.30.5.20 2607:f380:80f:f425::230 172.30.5.101 2607:f380:80f:f425::252 172.30.5.102 2607:f380:80f:f425::253			
<pre>;; Query time: 2 msec ;; SERVER: 172.30.5.101 ;; WHEN: Sun Sep 18 15: ;; MSG SIZE rcvd: 235</pre>)				
root@eh-kali-05:~#							

Finding the mail servers (mx records) for the cis.cabrillo.edu domain



Find domain administrative contact

dig soa cis.cabrillo.edu

;; global options: +cmd ;; Got answer: ;; ->>HEADER<<- opcode: QUER ;; flags: qr aa rd ra; QUERY				
<pre>;; OPT PSEUDOSECTION: ; EDNS: version: 0, flags:; ;; QUESTION SECTION:</pre>				email address of administrator
;cis.cabrillo.edu.	IN	SOA		dammerator
;; ANSWER SECTION: cis.cabrillo.edu. 8640 900 604800 1800) IN	SOA	nsl.cis.cabrillo.edu. cis-netad	dmin.cabrillo.edu. 2016091200 1800
;; AUTHORITY SECTION: cis.cabrillo.edu. 8640 cis.cabrillo.edu. 8640		NS NS	ns1.cis.cabrillo.edu. ns2.cis.cabrillo.edu.	
;; ADDITIONAL SECTION: ns1.cis.cabrillo.edu. 8640 ns1.cis.cabrillo.edu. 8640 ns2.cis.cabrillo.edu. 8640 ns2.cis.cabrillo.edu. 8640) IN) IN	A AAAA A AAAA	172.30.5.101 2607:f380:80f:f425::252 172.30.5.102 2607:f380:80f:f425::253	
;; Query time: 2 msec ;; SERVER: 172.30.5.101#53(1 ;; WHEN: Sun Sep 18 15:25:19 ;; MSG SIZE rcvd: 218		1)		
<pre>root@eh-kali-05:~#</pre>				

Finding the Start of Authority records for the cis.cabrillo.edu domain



Find domain hosts via zone transfer

dig axfr cis.cabrillo.edu

[root@ns2 ~]# dig axfr cis.cabrillo.edu

; <<>> DiG 9.8.2rc1-RedHat-9	9.8.2-0.47	.rc1.el6	<<>> axfr cis.cabrillo.edu					
;; global options: +cmd								
cis.cabrillo.edu. 8640	00 IN	SOA	ns1.cis.cabrillo.edu. cis-netadmin.cab					
rillo.edu. 2016091200 1800 9	00 604800	1800						
cis.cabrillo.edu. 8640	00 IN	TXT	"v=spf1 ip4:207.62.187.0/24 ip6:2607:f					
380:80f:f425::/32 -all"								
cis.cabrillo.edu. 8640)0 IN	MX	10 oslab.cis.cabrillo.edu.					
cis.cabrillo.edu. 8640)0 IN	NS	ns1.cis.cabrillo.edu.					
cis.cabrillo.edu. 8640)0 IN	NS	ns2.cis.cabrillo.edu.					
APC-01.cis.cabrillo.edu. 864	100 IN	A	172.30.5.38					
apollo.cis.cabrillo.edu. 864	100 IN	A	172.20.90.57					
Arya-01.cis.cabrillo.edu. 86	5400 IN	A	172.20.90.101					
Arya-02.cis.cabrillo.edu. 86	5400 IN	A	172.20.90.102					
Arya-03.cis.cabrillo.edu. 80	5400 IN	A	172.20.90.103					

snipped

cis.cabrillo.edu.	86400	IN	SOA	ns1.cis.cabrillo.edu.	cis-netadmin.cab
rillo.edu. 2016091200	1800 900	604800	1800		
;; Query time: 26 msec	•				
;; SERVER: 127.0.0.1#5	53(127.0.0	0.1)			
;; WHEN: Sun Sep 18 15	5:25:22 20	016			
;; XFR size: 480 record	rds (messa	ages 1,	bytes	12907)	
[root@ns2 ~]#					

Getting a zone transfer of all hosts. Note: most name servers are configured to never publicly release this information



Examine txt records

dig txt cis.cabrillo.edu

🛃 rsimms@opus-ii:~				-		×	
[rsimms@opus-ii ~]\$ dig	txt cis	.cabrill	Lo.edu			^	
; <<>> DiG 9.9.4-RedHat-9.9.4-51.el7 <<>> txt cis.cabrillo.edu ;; global options: +cmd ;; Got answer: ;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 8167 ;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 5							
;; OPT PSEUDOSECTION: ; EDNS: version: 0, fla ;; QUESTION SECTION:	ıgs :; udp	: 4096				I.	
;cis.cabrillo.edu.		IN	TXT				
;; ANSWER SECTION: cis.cabrillo.edu.	86400	IN	TXT	"v=spf1 ip4:207.62.187.0/24 ip6:2607:f380:80f::/48 -all"			
;; AUTHORITY SECTION: cis.cabrillo.edu. cis.cabrillo.edu.	86400 86400	IN IN	NS NS	ns2.cis.cabrillo.edu. ns1.cis.cabrillo.edu.			
;; ADDITIONAL SECTION: nsl.cis.cabrillo.edu. nsl.cis.cabrillo.edu. ns2.cis.cabrillo.edu. ns2.cis.cabrillo.edu.	86400 86400 86400 86400	IN IN IN IN	A AAAA A AAAA	172.30.5.101 2607:f380:80f:f425::252 172.30.5.102 2607:f380:80f:f425::253			
<pre>;; Query time: 0 msec ;; SERVER: 172.30.5.101 ;; WHEN: Mon Sep 18 19: ;; MSG SIZE rcvd: 236 [rsimms@opus-ii ~]\$</pre>			L)				

Looking at txt records may reveal network information



Activity

Using the dig command which domain uses more mx records, google.com or amazon.com?

Write your answer, including the count of mx records, in the chat window.



Activity

Using the dig command what is the email address of the network contact for umich.edu?

Write your answer in the chat window



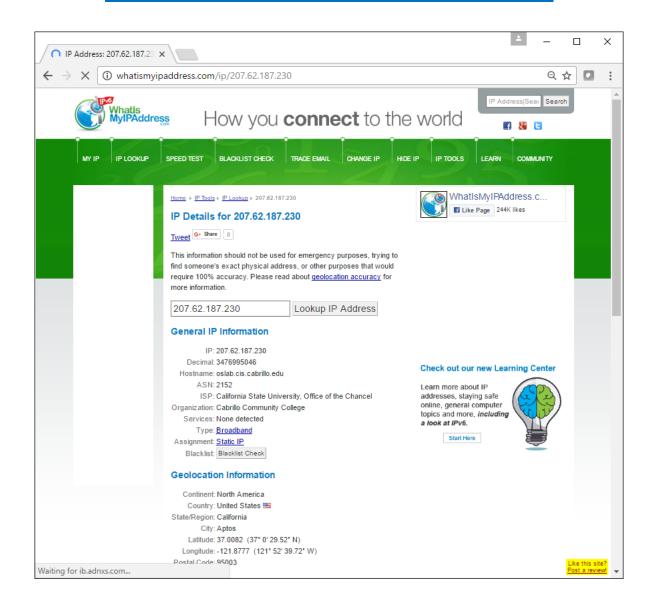
Identifying IP Addresses

whatismyipaddress.com/

87



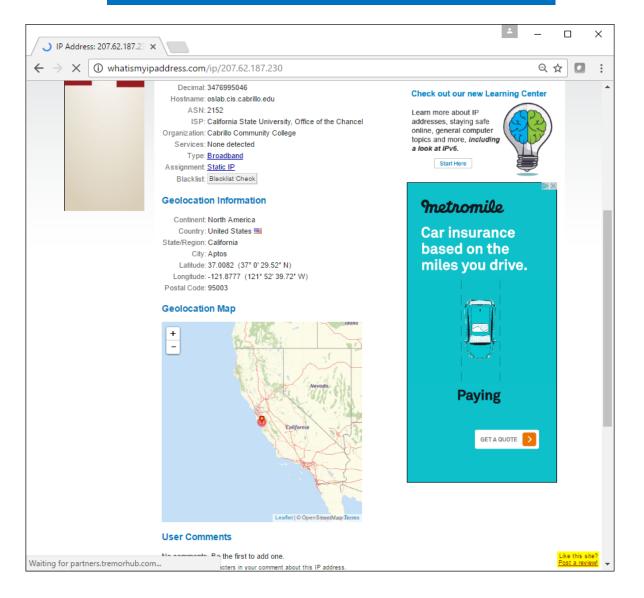
http://whatismyipaddress.com/



88

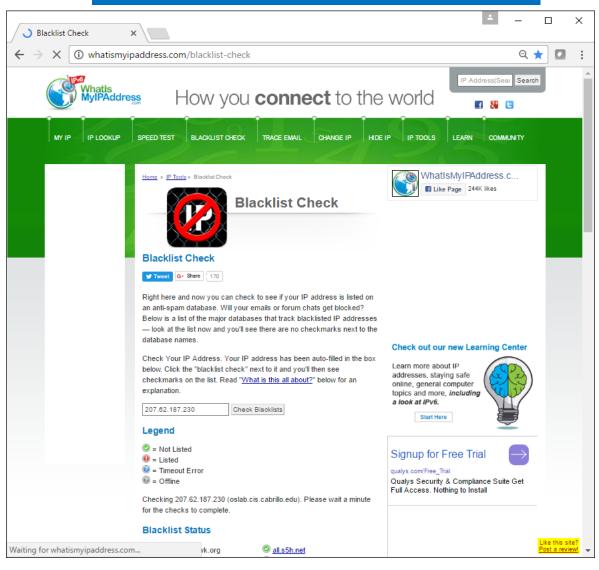


http://whatismyipaddress.com/





http://whatismyipaddress.com/





http://whatismyipaddress.com/

> C ③ what	tismyipaddress.com/blacklist-check			ର୍ ★
	Blacklist Status		Number	
	access.redhawk.org	all.s5h.net	Free Cell Phone Finder	-
	b.barracudacentral.org	Ispamcannibal.org		
	bl.spamcop.net	S bl.tiopan.com	Tracking Cell Phone	*
	blackholes.wirehub.net	🖉 blacklist.sci.kun.nl	Find IP Physical	
	block.dnsbl.sorbs.net	blocked.hilli.dk	Location	*
	bogons.cymru.com cbl.abuseat.org	cart00ney.surriel.com colless.anti-spam.org.cn		
	dev.null.dk	dialup.blacklist.jippg.org	Content Personalization	*
	dialups.mail-abuse.org	dialups.visi.com		
	dnsbl.abuse.ch	dnsbl.anticaptcha.net	Watch: Hillary Will Fail	*
	🖾 dnsbl.antispam.or.id	dnsbl.dronebl.org	Enter Address &	
	dnsbl.justspam.org dnsbl.sorbs.net	dnsbl.kempt.net dnsbl.tornevall.org	Location	*
	Insbisorbs.net	duinv.aupads.org	Mktg Automation	
	O dnsbl-2.uceprotect.net	Insbl-3.uceprotect.net	Checklist	*
	dul.dnsbl.sorbs.net	escalations.dnsbl.sorbs.net	Remove Malware - Free	
	hil.habeas.com	black.junkemailfilter.com		÷
	http.dnsbl.sorbs.net	intruders.docs.uu.se		
	ips.backscatterer.org	korea.services.net		
	I2.apews.org I2.apews.org I2.apews.org	mail-abuse.blacklist.jippg.org msgid.bl.gweep.ca		
	Inscientsbisorbs.net	Insgla.bl.gweep.ca Insgla.bl.gweep.ca Insgla.bl.gweep.ca		
	Old.dnsbl.sorbs.net	opm.tornevall.org		
	pbl.spamhaus.org	proxy.bl.gweep.ca		
	psbl.surriel.com	pss.spambusters.org.ar		
	rbl.schulte.org	rbl.snark.net		
	recent.dnsbl.sorbs.net	relays.bl.gweep.ca		
	relays.mail-abuse.org relays.mail-abuse.org	relays.nether.net		
	smtp.dnsbl.sorbs.net	sbl.spamhaus.org socks.dnsbl.sorbs.net		
	Spam.dnsbl.sorbs.net	Spam.olsentech.net		
	Spamquard.leadmon.net	Spamsources.fabel.dk		
	exitnodes.tor.dnsbl.sectoor.de	ubl.unsubscore.com		
	web.dnsbl.sorbs.net	xbl.spamhaus.org		
	zen.spamhaus.org	zombie.dnsbl.sorbs.net		
	🖾 dnsbl.inps.de	rbl.megarbl.net		
	Ø bl.mailspike.net			
	What is this all about?			

91



Activity

Top attackers

NoSweat : Sunday, September 17, 2017

Source address	Source Host Name	Source User	Count
203.157.175.9	203.157.175.9		13.61 k
18.220.249.81	ec2-18-220-249-81.us-east-2.compute.amazonaws.com		197
118.69.40.250	lamson.vn		114
62.81.86.6	atf-icfr179036-ovie.red.retevision.es		98
80.241.254.178	host-80-241-254-178.customer.co.ge		70
112.64.33.92	112.64.33.92		4
121.254.231.225	121.254.231.225		2
77.72.82.19	77.72.82.19		1

Pick one of the IP addresses above and using:

http://whatismyipaddress.com/

Find out who it was assigned to and whether it is blacklisted.

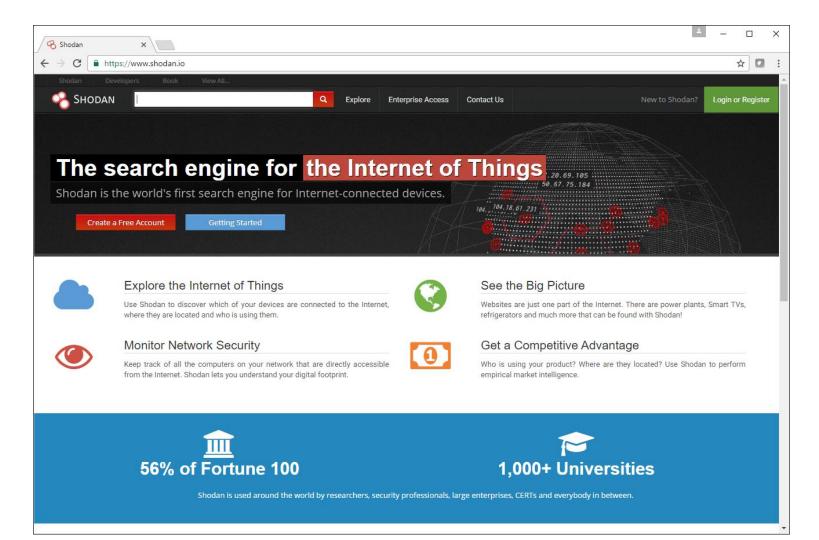
Put the organization name, country, and number of times blacklisted in the chat window



shodan

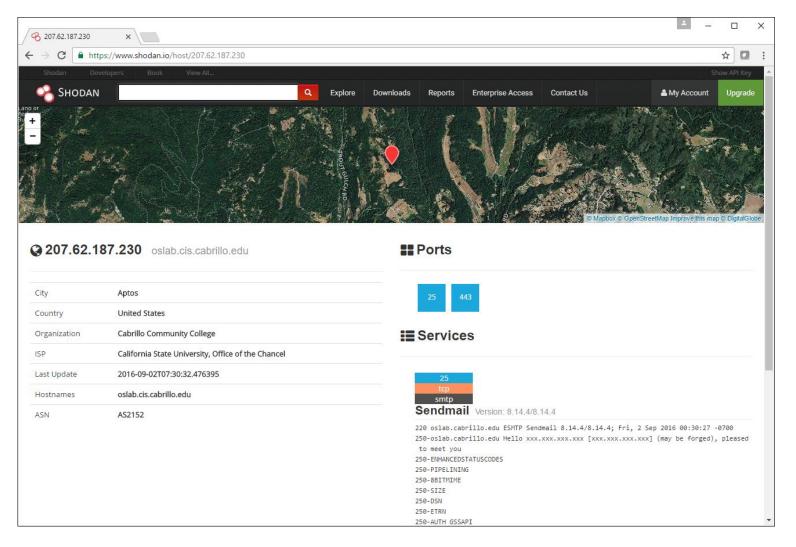


SHODAN





SHODAN





SHODAN search filters

Here are the basic search filters you can use:

city: find devices in a particular city

country: find devices in a particular country

geo : you can pass it coordinates

hostname: find values that match the hostname

net: search based on an IP or /x CIDR

os: search based on operating system

port: find particular ports that are open

before/after : find results within a timeframe

Find Apache servers in San Francisco:

apache city:"San Francisco"

Find Nginx servers in Germany:

nginx country:"DE"

Find GWS (Google Web Server) servers:

"Server: gws" hostname:"google"

Find Cisco devices on a particular subnet:

cisco net:"216.219.143.0/24"



Activity

Use the host command to find the IP address for:

microlab.simms-teach.com

Use shodan: https://www.shodan.io/

to discover passively which ports are open on that IP address.

Write those ports in the chat window



Light probing with telnet and nc



telnet command

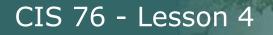
🧬 root@eh-kali-05	й ~ —		×
TELNET(1)	BSD General Commands Manual TELI	NET(1)	^
NAME			
telnet	 user interface to the TELNET protocol 		
SYNOPSIS			
telnet	[-468ELadr] [-S <u>tos</u>] [-b <u>address</u>] [-e <u>escapechar</u>] [-l <u>user</u>] [-n <u>tracefile</u>] [<u>port</u>]]	[<u>host</u>	
DESCRIPTION			
TELNET "). If	lnet command is used for interactive communication with another host using a protocol. It begins in command mode, where it prints a telnet prompt ("teln telnet is invoked with a <u>host</u> argument, it performs an open command implic: e description below.	net>	
Options	s:		
-4	Force IPv4 address resolution.		
-6	Force IPv6 address resolution.		
-8	Request 8-bit operation. This causes an attempt to negotiate the TELNET B option for both input and output. By default telnet is not 8-bit clean.	INARY	
-E	Disables the escape character functionality; that is, sets the escape char to ``no character''.	racter	
-L	Specifies an 8-bit data path on output. This causes the TELNET BINARY opt to be negotiated on just output.	tion	
-a Manual page	Attempt automatic login. Currently, this sends the user name via the USEN e telnet(1) line 1 (press h for help or q to quit)	R	~



netcat

	_		\times
NC(1) General Commands Manual		NC(1)	^
NAME			
nc - TCP/IP swiss army knife			
SYNOPSIS			
nc <u>[-options] hostname port[s] [ports]</u> nc <u>-l -p port [-options] [hostname] [port]</u>			
DESCRIPTION			
netcat is a simple unix utility which reads and writes data across tions, using TCP or UDP protocol. It is designed to be a reliable that can be used directly or easily driven by other programs and s same time, it is a feature-rich network debugging and exploration tool create almost any kind of connection you would need and has seve built-in capabilities. Netcat, or "nc" as the actual program is named been supplied long ago as another one of those cryptic but standard Up	"back-end" scripts. A l, since it eral intere d, should	tool At the t can esting	
In the simplest usage, "nc host port" creates a TCP connection to the the given target host. Your standard input is then sent to the host, that comes back across the connection is sent to your standard output ues indefinitely, until the network side of the connection shuts dow this behavior is different from most other applications which shut and exit after an end-of-file on the standard input.	, and any t. This co wn. Note	ything ontin□ that	
Netcat can also function as a server, by listening for inbound connect trary ports and then doing the same reading and writing. With min netcat doesn't really care if it runs in "client" or "server" mode els data back and forth until there isn't any more left. In either mode be forced after a configurable time of inactivity on the network side	nor limitat it still de, shutdow	:ions, shov□	
Manual page nc(1) line 1 (press h for help or q to quit)			~





telnet and nc commands

telnet <host-or-IP-addess> <port>

nc <host-or-IP-addess> <port>



Probing simms-teach.com (telnet)

telnet simms-teach.com 80 HEAD / HTTP/1.0

(then enter blank line)

🛃 root@eh-kali-05: ~	_	×
<pre>root@eh-kali-05:~# telnet simms-teach.com 80 Trying 208.113.154.64 Connected to simms-teach.com. Escape character is '^]'. HEAD / HTTP/1.0</pre>		^
HTTP/1.1 200 OK Date: Tue, 20 Sep 2016 06:00:50 GMT Server: Apache Last-Modified: Sat, 01 Nov 2014 04:18:40 GMT		
ETag: "304-506c4687e0800" Accept-Ranges: bytes Content-Length: 772 Connection: close Content-Type: text/html		
Connection closed by foreign host. root@eh-kali-05:~#		~

We know it is an Apache web server but not much else



Probing simms-teach.com (nc)

nc simms-teach.com 80 HEAD / HTTP/1.0

(then enter blank line)

root@eh-kali-05:~# nc simms-teach.com 80
HEAD / HTTP/1.0

HTTP/1.1 200 OK Date: Tue, 19 Sep 2017 17:57:21 GMT Server: Apache Last-Modified: Sat, 01 Nov 2014 04:18:40 GMT ETag: "304-506c4687e0800" Accept-Ranges: bytes Content-Length: 772 Connection: close Content-Type: text/html

root@eh-kali-05:~#

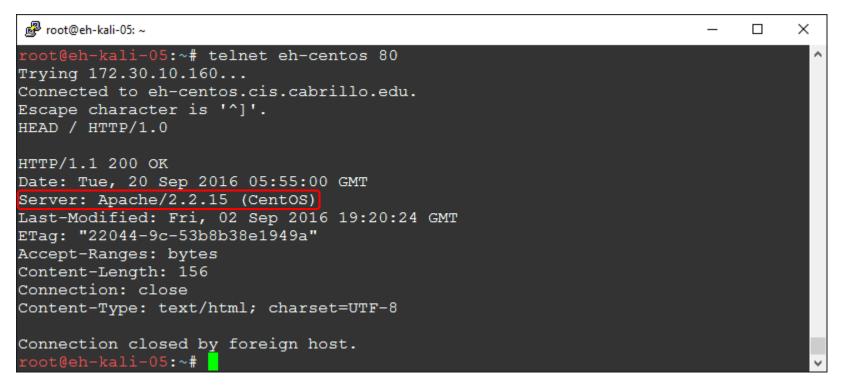
We know it is an Apache web server but not much else



Probing eh-centos VM (telnet)

telnet eh-centos 80 HEAD / HTTP/1.0

(then enter blank line)



We know it is an Apache web server version 2.2.15 on Centos



Probing eh-centos VM (nc)

nc eh-centos 80 HEAD / HTTP/1.0

(then enter blank line)

root@eh-kali-05:~# nc eh-centos.cis.cabrillo.edu 80 HEAD / HTTP/1.0 HTTP/1.1 400 Bad Request Date: Tue, 19 Sep 2017 16:28:14 GMT Server: Apache/2.2.15 (CentOS) Content-Length: 301 Connection: close Content-Type: text/html; charset=iso-8859-1 <!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN"> <html><head> <title>400 Bad Request</title> </head><body> <h1>Bad Request</h1> Your browser sent a request that this server could not understand.
 <hr> <address>Apache/2.2.15 (CentOS) Server at 127.0.0.1 Port 80</address> </body></html> oot@eh-kali-05:~#

We know it is an Apache web server version 2.2.15 on Centos



Probing OWASP VM (telnet)

telnet 10.76.5.101 80 HEAD / HTTP/1.0

(then enter blank line)

💕 root@eh-kali-05: ~	_	×
root@eh-kali-05:~# telnet 10.76.5.101 80 Trying 10.76.5.101		^
Connected to 10.76.5.101.		
Escape character is '^]'.		
HEAD / HTTP/1.0		
HTTP/1.1 200 OK		
Date: Tue, 20 Sep 2016 05:18:12 GMT		
Server: Apache/2.2.14 (Ubuntu) mod_mono/2.4.3 PHP/5.3.2-1ubuntu4.30 w n-Patch proxy_html/3.0.1 mod_python/3.3.1 Python/2.6.5 mod_ssl/2.2.1 .9.8k Phusion_Passenger/4.0.38 mod_perl/2.0.4 Perl/v5.10.1 Last-Modified: Fri, 31 Jul 2015 02:55:52 GMT		
ETag: "45113-6da3-51c2215365e00"		
Accept-Ranges: bytes Content-Length: 28067		
Vary: Accept-Encoding		
Connection: close		
Content-Type: text/html		
Connection closed by foreign host.		
root@eh-kali-05:~#		~

We know it is an Apache web server version 2.2.14 on Ubuntu as well as various modules that are loaded



Probing OWASP VM (nc)

nc 10.76.5.101 80 HEAD / HTTP/1.0

(then enter blank line)

root@eh-kali-05:~# nc 10.76.5.101 80

HEAD / HTTP/1.0

HTTP/1.1 200 OK Date: Tue, 19 Sep 2017 17:37:46 GMT Server: Apache/2.2.14 (Ubuntu) mod_mono/2.4.3 PHP/5.3.2-1ubuntu4.30 with Suhosin-Patch proxy_html/3 .0.1 mod_python/3.3.1 Python/2.6.5 mod_ssl/2.2.14 OpenSSL/0.9.8k Phusion_Passenger/4.0.38 mod_perl/ 2.0.4 Perl/v5.10.1 Last-Modified: Fri, 31 Jul 2015 02:55:52 GMT ETag: "45f13-6da3-51c22f5365e00" Accept-Ranges: bytes Content-Length: 28067 Vary: Accept-Encoding

Connection: close Content-Type: text/html

root@eh-kali-05:~#

We know it is an Apache web server version 2.2.14 on Ubuntu as well as various modules that are loaded



Activity

Use telnet to get header information from the microsoft.com webserver.

What web server software and version is ruining there?

Put your answer in the chat window



Using telnet for port 25 (SMTP)

Some SMTP commands

HELO <sending-hostname>

EHLO <sending-hostname>

MAIL From: *<source email address>*

RCPT To: < destination email address >

DATA

QUIT

Initiate SMTP conversation

Initiate extended SMTP conversation

Source

Destination

Message body

End connection



Probing port 25 on EH-Centos VM

root@eh-kali-05:~# telnet eh-centos 25 Trying 172.30.10.160... Connected to eh-centos.cis.cabrillo.edu. Escape character is '^]'. 220 eh-centos.cis.cabrillo.edu ESMTP Postfix EHLO eh-kali-05.cis.cabrillo.edu 250-eh-centos.cis.cabrillo.edu 250-PIPELINING 250-SIZE 10240000 250-VRFY 250-ETRN 250-ENHANCEDSTATUSCODES 250-8BITMIME 250 DSN MAIL From: root@eh-kali-05.cis.cabrillo.edu 250 2.1.0 Ok RCPT To: cis76@eh-centos.cis.cabrillo.edu 250 2.1.5 Ok DATA 354 End data with <CR><LF>.<CR><LF> What a crazy way to send an email huh? 250 2.0.0 Ok: gueued as 5B9B76A97 quit 221 2.0.0 Bye Connection closed by foreign host. root@eh-kali-05:~#

This server is running Postfix as the SMTP service.

You can actually use telnet to send an email!



Checking for new email on EH-Centos VM

```
[cis76@EH-Centos ~]$ mail
Heirloom Mail version 12.4 7/29/08. Type ? for help.
"/var/spool/mail/cis76": 1 message 1 new
>N 1 root@eh-kali-05.cis. Tue Sep 20 10:12 10/484
& 1
Message 1:
From root@eh-kali-05.cis.cabrillo.edu Tue Sep 20 10:12:30 2016
Return-Path: <root@eh-kali-05.cis.cabrillo.edu>
X-Original-To: cis76@eh-centos.cis.cabrillo.edu
Delivered-To: cis76@eh-centos.cis.cabrillo.edu
Status: R
What a crazy way to send an email huh?
```

```
& quit
Held 1 message in /var/spool/mail/cis76
[cis76@EH-Centos ~]$
```

Yep, it really works!



Activity

Using the example above use telnet to send a super simple message to cis76@eh-cenos.cis.cabrillo.edu

Next login to EH-Centos as the cis76 user and check your mail.

Put the mail header which looks like this:

root@eh-kali-05.cis. Tue Sep 20 10:12 10/484

into the chat window



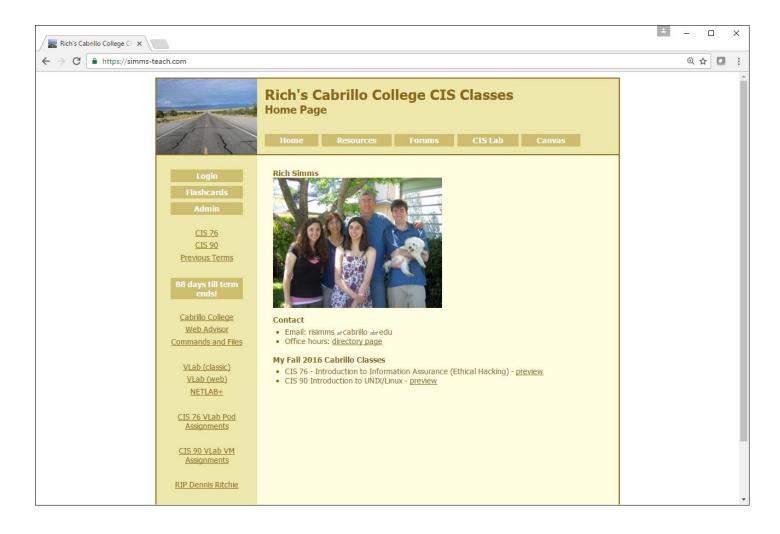
Website Information



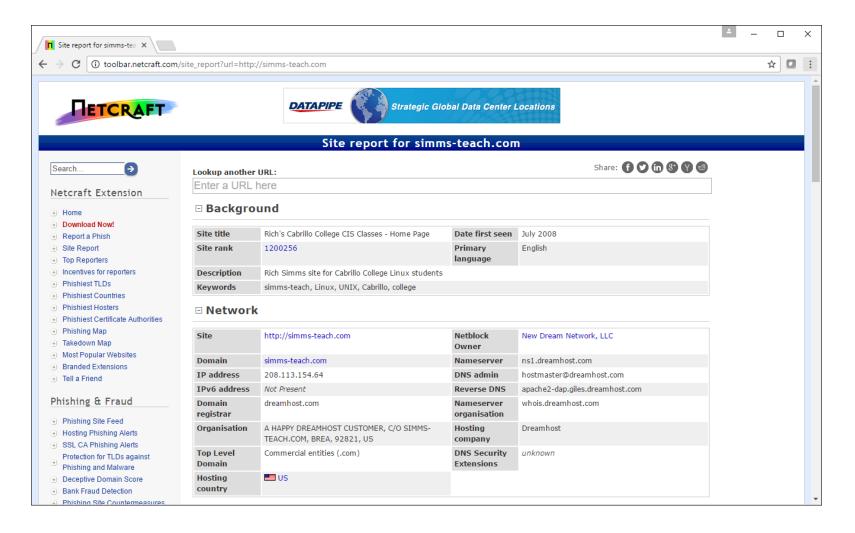
C https://www.netcraft	com						*
ETCRAFT						Contact Us Subscribe	e 🛛 🕻 Searc
me News Anti-Phishing	- Security Testi	ng 🛨 Interr	net Data Mining 👻	Performance 🔻	About Netcraft 👻		
Internet Security	/ and Data	Mining				Latest News	
Netcraft provide internet secu						Get in Touch	
scanning. We also analyse ma hosting providers and SSL cer			ding the market shar	e or web serve	ers ² , operating systems,	+44 (0) 1225 447500 info@netcraft.com	
Anti-Phishing	Security T	esting	Internet Da Mining	ata	Performance	What's that site running?	
Market Share for Top Servers A		Understand	your Competitors			Find out what technologies are powe any website:	ring
80%	Apache Microsoft	customer	e analysis of hosting movements		entifying trends and	netcraft.com	→
60%	Google	share of SSL certi	web servers, operati ficate authorities	ng systems, ho	sting providers and	Audited by Netcraft	
20%			-		ed criteria (for nosted in a particular	This site is Audited Netcraft. Get your Security Audited 2015-09-19 Cick to Verify Vulnerabilities»	
		Explo	re the in	ternet	's growth	Report Suspicious URL	oport
						the URL ^D of the attacker's site.	eport
Solutions For						Report Suspicious URL	
 Banks Certificate Authorities 			 Investors and Ver Online Merchants 		s		
 Domain Registrars Domain Registries 			 Security Provider Software Industry 				



My Website









 C (i) toolbar.netcraft.c Phishing Site Countermeasures 	om/site_report?url=http:/	//simms-teach.com						☆	
	Hosting	History							
Extension Support	Netblock owner	r	IP ad	dress	05	Web server	Last seen Refresh		
) FAQ) Glossary	New Dream Netw	vork, LLC 417 Associated Rd. PMB 257 Brea CA US 92	821 208.1	13.154.64	Linux	Apache	18-Sep-2016		
 Contact Us Report a Bug 	Security								
utorials	Netcraft Risk Rating [FAQ]	0/10							
) Installing the Extension) Using the Extension	On Spamhaus Block List	No	On Exploits Block List	No					
 Getting the Most Reporting a Phish 	On Policy Block List	No No	On Domain Block List	No					
Website Terms of Use Phishing Site Feed Security Services Contact Us	openspf.org. Warning: It appear domain.	rs that this host does not have an SPF record. Setting	up an SPF record	helps preve	nt the d	elivery of forgeo	l emails from your		
f) (*) (*) (*) (*) (*) (*) (*) (*) (*) (*	DMARC (Domain-b	pased Message Authentication, Reporting and Conform their domain should be authenticated. It builds on SPI							
	-	information please see dmarc.org.	and DRIN, provid						
	failures. For more	information please see dmarc.org. : have a DMARC record.	and DRM, provid						



etcraft.com/site_report?url=http://simms-teach.com				☆ 🖸	
Web Trackers					
		ackable resources include social sharing widgets, javascript files, and in across the web. Data derived from these trackers are primarily used fo			
1 known tracker was identified.					
Companies		Categories			
Company 🔺 Primary Category	Tracker	Popular Sites with this Tracker			
W3C 🖗 Widget	w3.ORG	www.binnews.in, www.elitetorrent.net, db.aa419.org			
Site Technology		Fetched on 16th Septem	ber 2016		
57					
Server-Side Includes all the main technologies that Netcr Technology Description	raft detects as runnin ed and/or running	ng on the server such as PHP. Popular sites using this tech www.wired.com , www.imagefa www.t411.ch			



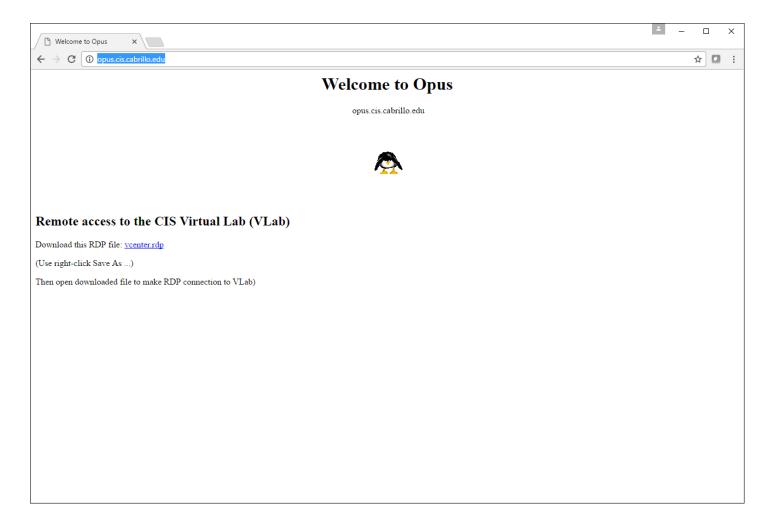
oort for simms-tea	×			÷ _	-
i toolbar.n	netcraft.com/site_report?url=http://simms-t	each.com			7
	Client-Side				
		logies that run on the browser (such as JavaScript and Adobe Flash).			
	Technology	Description	Popular sites using this technology		
	JavaScript 🖗	Open source programming language commonly implemented as part of a web browser	www.bbc.co.uk , www.google.de , www.linkedin.com		
		n consists of a code that pairs each character from a given repertoire with s, octets, or electrical pulses in order to facilitate the transmission of data s or for data storage.			
	Technology	Description	Popular sites using this technology		
	ISO-8859-1 🗗	Latin alphabet no. 1	www.orange.fr , www.amazon.co.uk , www.corriere.it		
	UTF8 &	UCS Transformation Format 8 bit	www.ebay.de , www.googleadservices.com , www.ebay.com		
	HTTP Compression HTTP compression is a capab transmission speeds betwee	ility that can be built into web servers and web clients to make better use n both.	of available bandwidth, and provide greater		
	Technology	Description	Popular sites using this technology		
	Gzip Content Encoding 🖞	Gzip HTTP Compression protocol	www.wunderground.com , www.satelliteguys.us , www.sportmediaset.mediaset.it		
	Doctype				
		n, or DOCTYPE, is an instruction that associates a particular SGML or XML OTD).	document (for example, a webpage) with a		
	Technology	Description	Popular sites using this technology		
	XHTML 🖗	Extended version of the Hypertext Markup Language	www.virustotal.com ,		



C i toolbar.ne	etcraft.com/site_report?url=http://simm	s-teach.com		☆ [3
	HTTP Compression HTTP compression is a cap transmission speeds betw	pability that can be built into web servers and web clients to make better een both.	use of available bandwidth, and provide greater		
	Technology	Description	Popular sites using this technology		
	Gzip Content Encodin	g 🚱 Gzip HTTP Compression protocol	www.wunderground.com , www.satelliteguys.us , www.sportmediaset.mediaset.it		
	Doctype A Document Type Declara Document Type Definition	tion, or DOCTYPE, is an instruction that associates a particular SGML or X ((DTD).	ML document (for example, a webpage) with a		
	Technology	Description	Popular sites using this technology		
	XHTML 🖉	Extended version of the Hypertext Markup Language	www.virustotal.com , www.girlsofdesire.org , www.ilfattoquotidiano.it		
	HTML &	The main markup language used for displaying web pages within browsers	www.amazon.de , www.imdb.com , www.amazon.fr		
	00011				
	CSS Usage Cascading Style Sheets (C written in a markup langu Technology CSS Media Query	CSS) is a style sheet language used for describing the presentation seman uage (such as XHTML). Description No description	Popular sites using this technology www.bloomberg.com ,		
	Cascading Style Sheets (C written in a markup langu Technology CSS Media Query	Jage (such as XHTML). Description No description	Popular sites using this technology www.bloomberg.com , www.dailymail.co.uk , www.zone- telechargement.com		
	Cascading Style Sheets (C written in a markup langu Technology	Jage (such as XHTML). Description	Popular sites using this technology www.bloomberg.com , www.dailymail.co.uk , www.zone-		



Opus website





→ C ③ toolbar.netcraft.cor	n/site_report?url=http:	//opus.cis.cabrillo.edu/			☆ 🖸
HETCRAFT	¢.				
		Site report for opus.ci	s.cabrillo.e	du	
earch	Lookup another	101.		Share: 🚹 💙 👘 😵 💙 🚳	
	Enter a URL				
etcraft Extension					
Home	Backgro	und			
Download Now!	Site title	Welcome to Opus	Data first soon	December 2014	Global
Report a Phish Site Report	Site rank	welcome to opus	Primary	English	Data
Top Reporters	Site ralik		language	English	Center
Incentives for reporters	Description	Not Present	5 5		Locations
Phishiest TLDs	Keywords	Not Present			
Phishiest Countries	Reywords	Not reserve			
Phishiest Hosters	Network	C C C C C C C C C C C C C C C C C C C			
Phishiest Certificate Authorities					
Phishing Map Takedown Map	Site	http://opus.cis.cabrillo.edu	Netblock Owner	Cabrillo Community College	
Most Popular Websites	Domain	cabrillo.edu	Nameserver	lola.cabrillo.edu	DATAPIPI
Branded Extensions	IP address	207.62.187.230	DNS admin	netadmin@cabrillo.edu	*
Tell a Friend	IPv6 address	2607:f380:80f:f425:0:0:230	Reverse DNS	unknown	
hishing & Fraud	Domain	educause.net	Nameserver	whois.educause.net	
Phishing Site Feed	registrar		organisation		
Hosting Phishing Alerts	Organisation	Cabrillo Community College District, 6500 Soquel Drive, Aptos, 95003, United States	Hosting company	cabrillo.edu	
SSL CA Phishing Alerts Protection for TLDs against	Top Level	Educational entities (.edu)	DNS Security	unknown	
Phishing and Malware	Domain		Extensions		
Deceptive Domain Score	Hosting	The second secon			NUME 1992 - 5 2



Site report for opus.cis.ca X							*	- [×
← → C ① toolbar.netcraft.com/s	site_report?url=http;	//opus.cis.cabrillo.edu/						\$:
Phishing Site Countermeasures	🗆 Hosting	History					~	% . '	•
Extension Support	Netblock owne	r	IP address	05	Web server	Last seen			
 	Cabrillo Commun 3198	ity College 6500 Soquel Drive Aptos CA US 95003-	207.62.187.23	0 Linux	Apache/2.2.15 CentOS	20-Sep-2016			
Tutorials	Security								
 ● Installing the Extension ● Using the Extension 	Netcraft Risk Rating [FAQ]	1/10							
 Getting the Most Reporting a Phish 	Block List	No	Block List	No					
About Netcraft	On Policy Block List	No	On Domain Block List	No					
 Netcraft Home → About Netcraft 	🗆 Sender I	Policy Framework							
 → Website Terms of Use → Phishing Site Feed → Security Services 		licy Framework (SPF) describes who can send mail c th rule consists of a qualifier followed by a specificati- form							
 Ocntact Us 		rs that this host does not have an SPF record. Settir	g up an SPF record	helps pre	event the delivery of for	ged emails from			
₲♥₵₿₿₿₿₿	DMARC								
	purporting to origi	ased Message Authentication, Reporting and Confor nate from their domain should be authenticated. It i s. For more information please see dmarc.org.							
		have a DMARC record.							
	Web Tra	ckers							
	images. These tra	hird-party resources loaded onto a webpage. Trackal :kers can be used to monitor individual user behavio analytics purposes.							-



	com/site_report an=ittp://o	pus.cis.cabrillo.edu/			\$		
About Netcraft Website Terms of Use Phishing Site Feed Security Services Contact Us One Site () () () () () () () () () () () () ()	series of rules. Each r please see openspf.or	rule consists of a qualifier followed by a specification	its behalf. This is done by publishing an SPF record containing a of which domains to apply this qualifier to. For more information up an SPF record helps prevent the delivery of forged emails from				
	purporting to originat	te from their domain should be authenticated. It bui For more information please see dmarc.org.	nce) is a mechanism for domain owners to indicate how mail lds on SPF and DKIM, providing a method to set policy and to give				
	🗆 Web Track	Web Trackers					
		ers can be used to monitor individual user behaviour	resources include social sharing widgets, javascript files, and across the web. Data derived from these trackers are primarily used				
	for advertising of ana	ayucs purposes.					
	No known trackers						
		s were identified.	Fetched on 20th September 2016				
	No known trackers	s were identified. nology ers	Fetched on 20th September 2016 services such as security, data services, transaction support, load				
	No known trackers	s were identified. 10009 ers is a server that provides software applications with					
	No known trackers Site Techr Application Server An application server balancing, and manager	s were identified. Tology ers is a server that provides software applications with gement of large distributed systems.	services such as security, data services, transaction support, load				



Activity

Using netcraft:

https://www.netcraft.com/

To passively compare the Opus and Opus-II servers without visiting them:

opus.cis.cabrillo.edu opus-ii.cis.cabrillo.edu

Which server uses OpenSSL technology

Write your answer in the chat window



robtex.com



Robtex

📑 simms-teach.com - Robte 🗙	0	- □) ×
← → C A Robtex LTD [CY] https://www.robtex.com/dns-lookup/simms-teach.com	7	*	
🗰 Apps 🛐 Yahoo 📙 Cabrillo College 📙 Health 📃 Network 📙 Medical 📃 CIS 76 links 📃 Lab Development 🧧 Home 📙 Music 🗅 Expand All 🕒 Link Comments	; 🗖	Other b	ookmarks
simms-teach.com	com >>>s	imms-te	each
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Try our chrome extension!			
ANALYSIS RECORDS SEO WOT SHARED GRAPH HISTORY WHOIS DNSBL	GRAP	H(old)	1
ANALYSIS		Ť⊥	
Simms-teach.com has three name servers and one IP number.		*	
Dreamhost name servers			
The name servers are nal.dreamhost.com i (used by 1,060,000 domains), nal.dreamhost.com (used by 1,070,000 domains) and nal.dreamh (used by 1,070,000 domains).	lost.com	n 🛋	
The combination is used by 1,060,000 domains.			
Example: manalive.net, graphpress.com, abrdgd.org and rihana-ries.com.			
IP number			
The IP number is 208.113.154.64 🕮 (used by 75 host names).			
65 domains use only the IP number 208.113.154.64 👾			
Example: unitedspaceschool.com, www.jamethiel.com, tlcmagonline.com and hybegnu.com.			

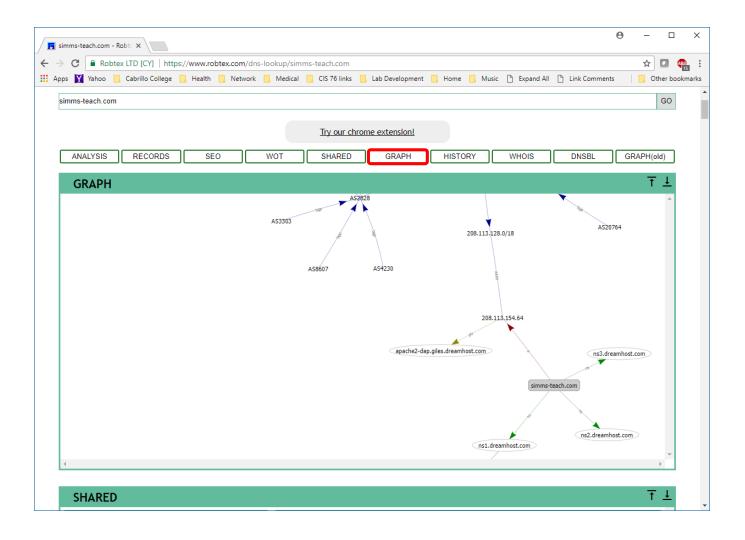


Robtex

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🗰 Apps 🍸 Yahoo 📃 Cabrillo College 🛄 Health 📃 Network 📗	Medical 📙 CIS 76 links 📃 Lab Development 📙 Home 📃 Music 🕒 Expand All 🕒 Link Comments 📃 Other bookmarks
<u>simms-teach.com</u>	Robtex >>>DNS >>>com >>> simms-teach
Control Twitter In LinkedIn F Facebook V Follow 640 followers	K Vkontakle G+ Google+ S Email 🔁 Print + More
simms-teach.com	GO
	Try our chrome extension!
ANALYSIS RECORDS SEO	WOT SHARED GRAPH HISTORY WHOIS DNSBL GRAPH(old)
SHARED	₹ ±
Using as mail server under another name	Siblings
timerthemovie.com	Siblings are domains or hostnames on the same level, under the same parent level. Not necessarily related in any other way
1 results shown.	bidefordtaxis.com
	creativemadebranding.com erwinlutzer.com
	halestudio.com
	karanfilkargo.com
	millfieldconsulting.com
	piscatawayfireschool.com
	savenwpp.com
	theflashpackers.com
	zurisinmobiliaria.com
	10 results shown.
IP numbers Sharing IP numbers	Partially sharing IP numbers Name servers Sharing name servers
208.113.154.64 bobgordonfilms.com	jfleach.com+ acleanerwindow.com
1 roculte chown	mathewslandconservancy.com+ danislojistik.com v



Robtex





Activity

Use robtex https://www.robtex.com on:

www.shodan.io

Using the "Shared" view what are some other websites that use the same IP address?

Write your answer in the chat window



Maltego



TNT Major Crimes TV Series



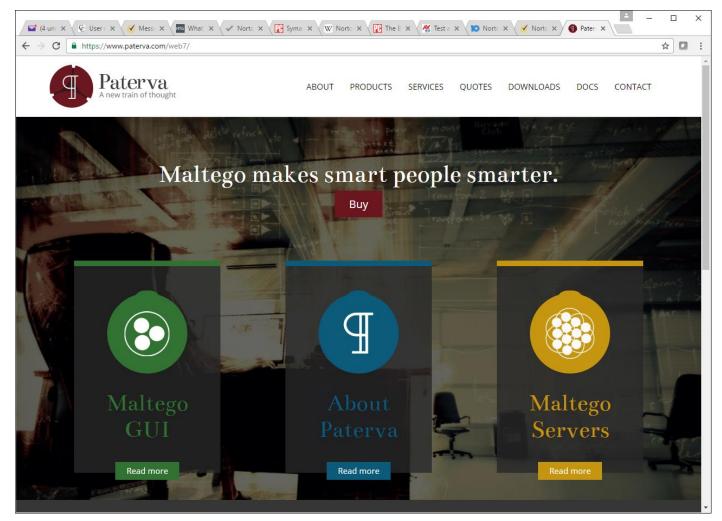
https://www.pinterest.com/pin/108438303502515403/



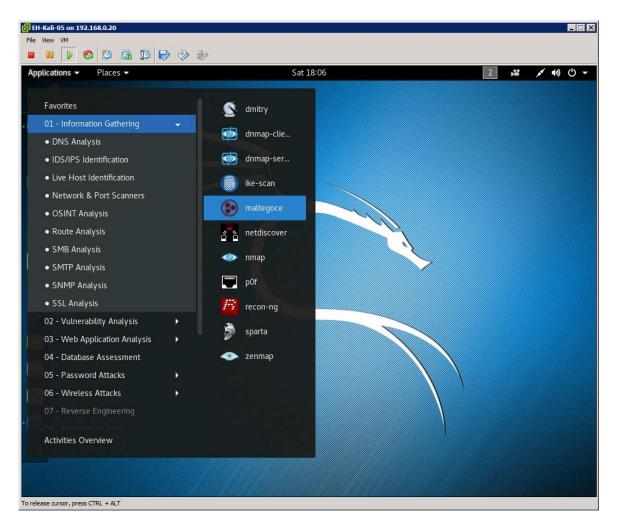
The community edition is a free version of the commercial client Maltego with various limitations. Limitations :

- Maximum of 12 results per transform
- You need to register on our website to use the client
- API keys expire every couple of days
- Runs on a (slower) server that is shared with all community users
- Communication between client as server is not encrypted



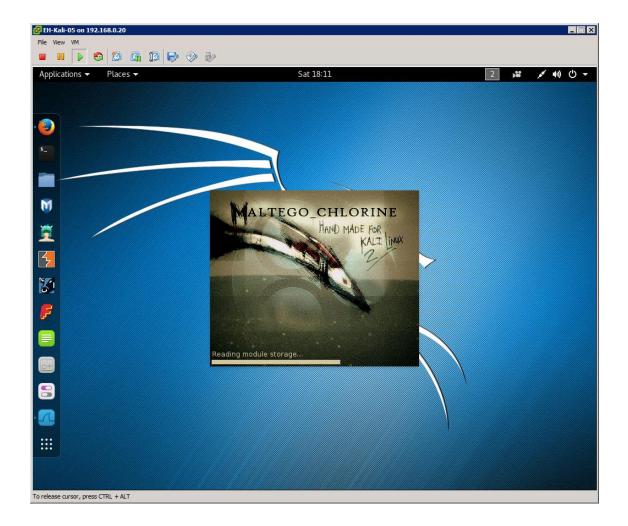




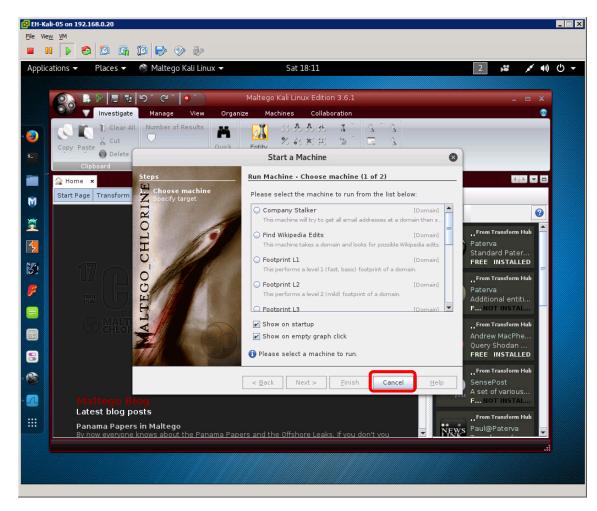


Applications > 01-Information Gathering > maltegoce







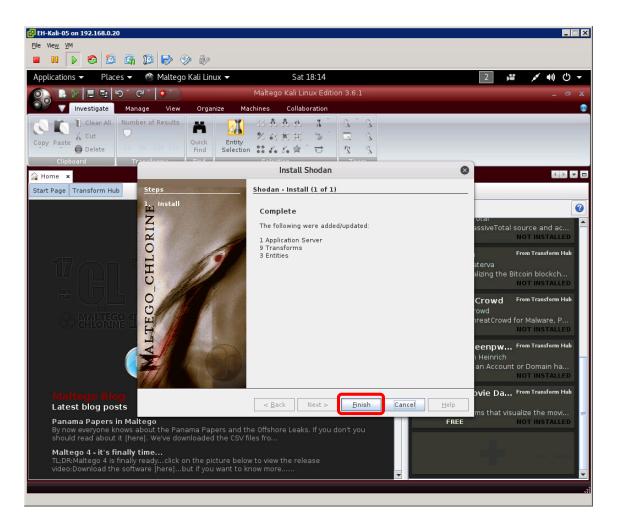






Install Shodan transform



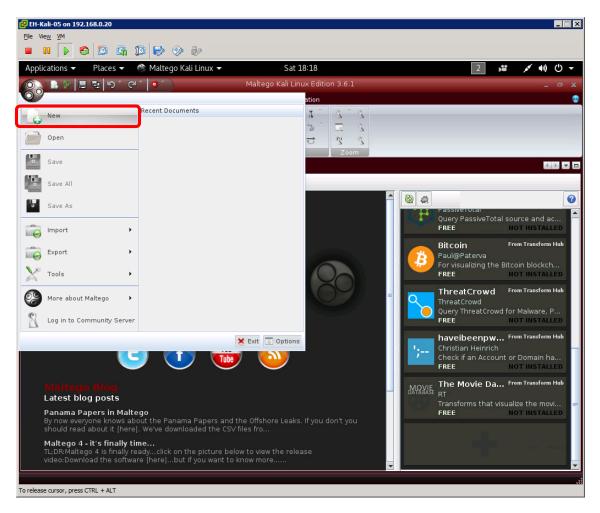




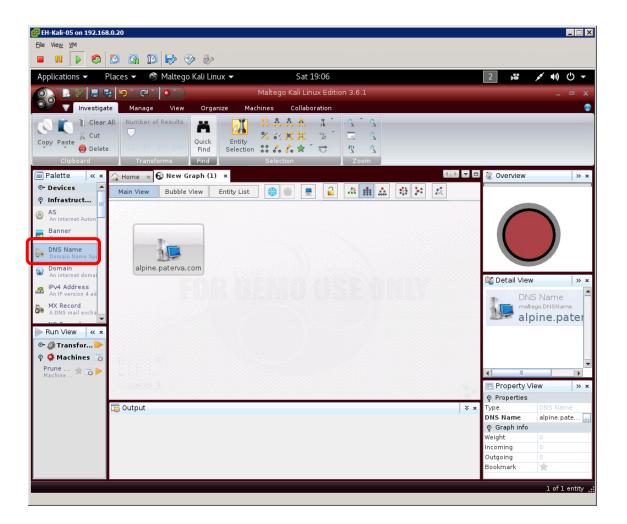


Click main Maltego icon.



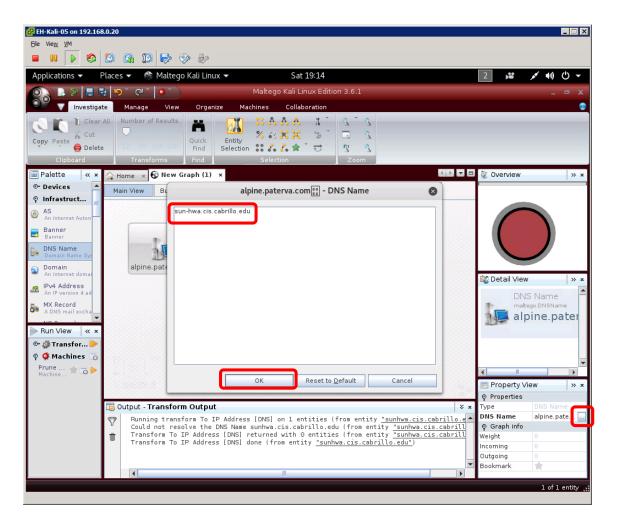






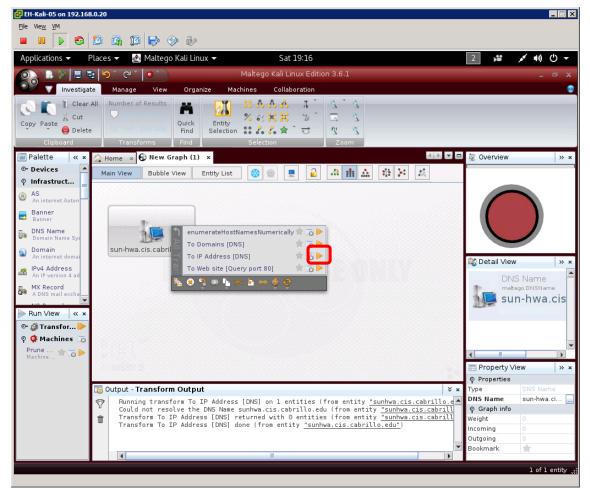
Click on DNS Name in the Infrastructure Palette and drag to the New Graph.





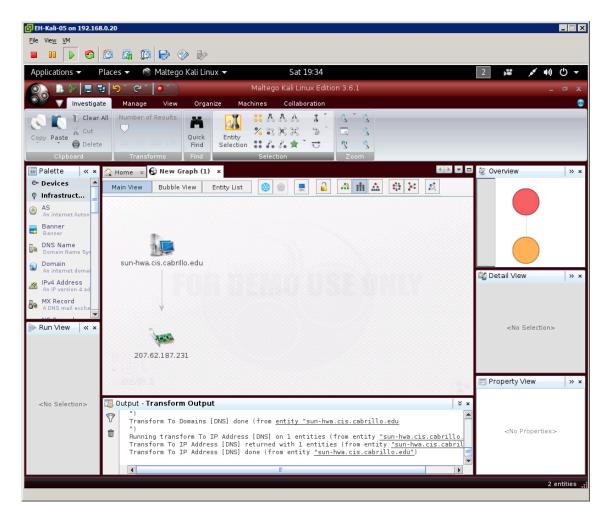
Click the "..." icon in the Property View to change the DNS Name to sun-hwa.cis.cabrillo.edu then click OK.





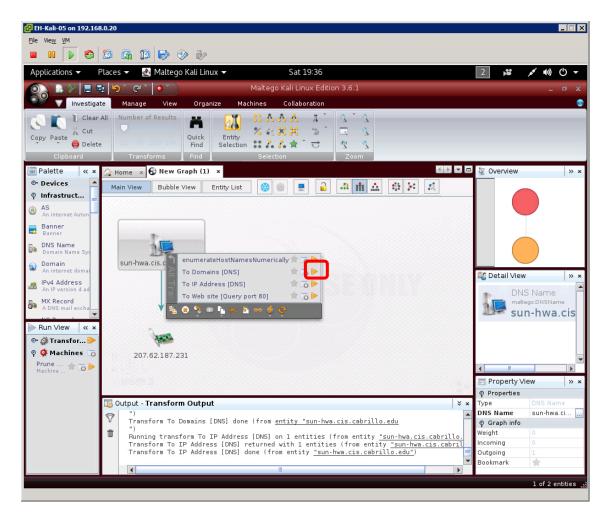
Run the "To IP Address [DNS]" transform to get the IP address.





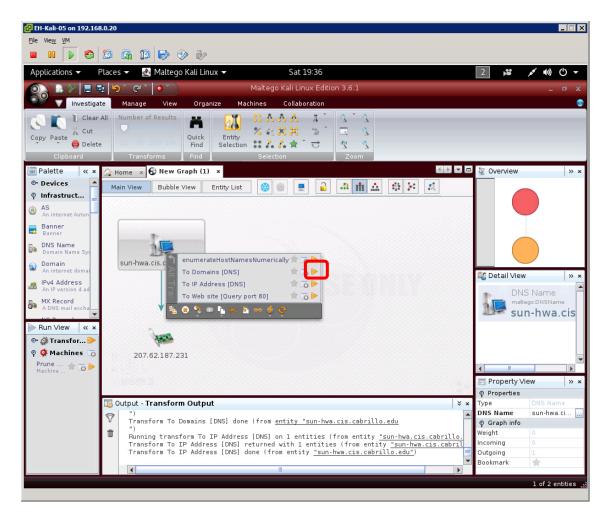
The IP address shows now below the little NIC icon.





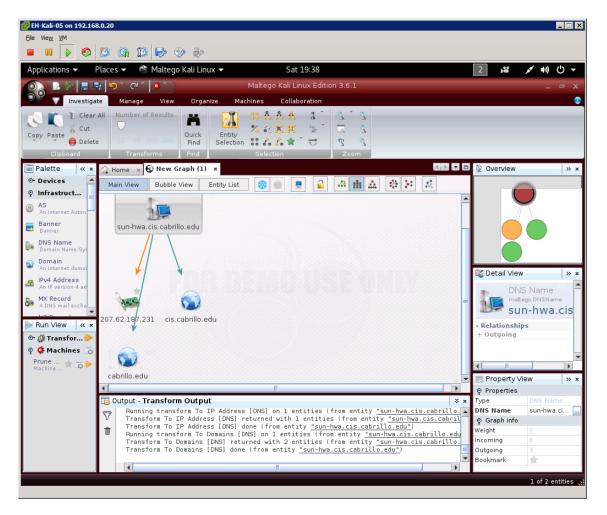
Run the To Domains [DNS] transform to get the domain.





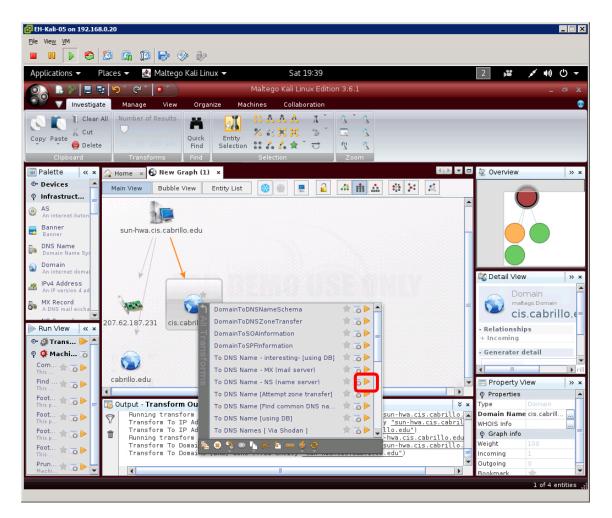
Run the "To Domains [DNS]" transform to get the domains.





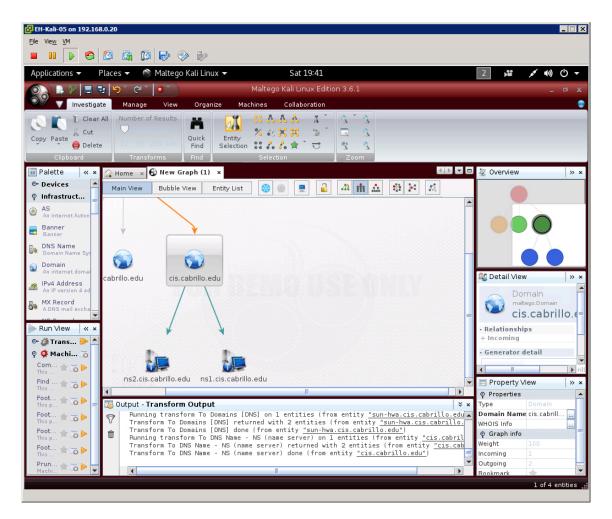
Notice both the domain and sub-domain appear.





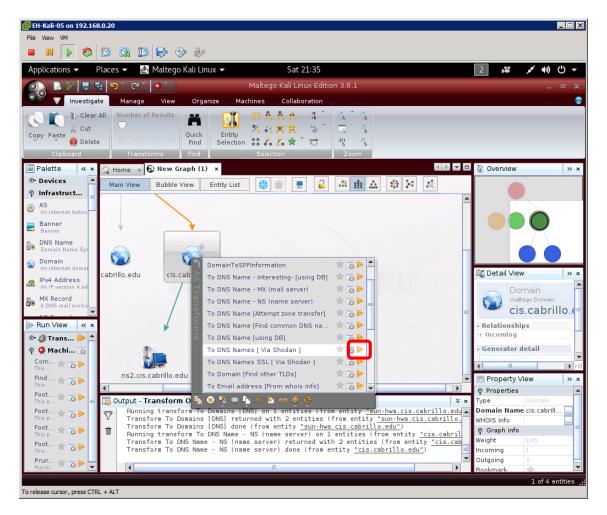
Select the sub-domain and run the "To DNS Name - NS (Name Server)" transform to get the name servers.





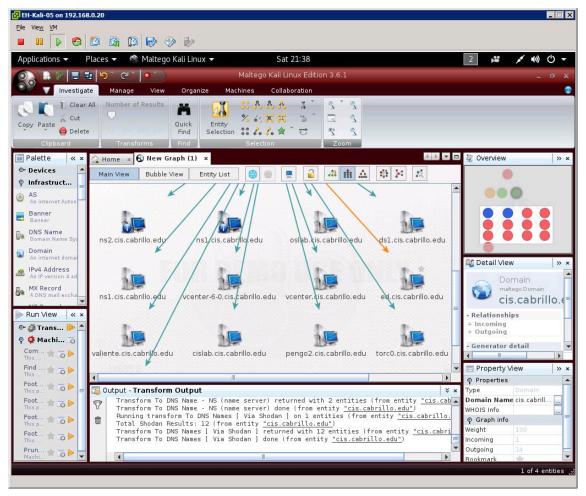
Notice both the domain and sub-domain appear.





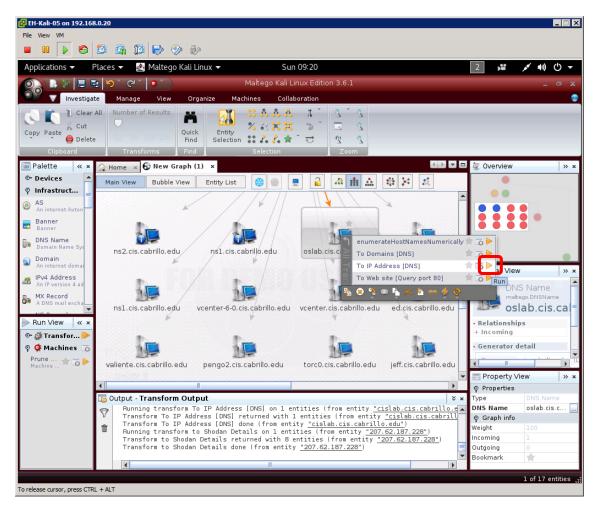
Select the sub-domain and run the "To DNS Names [Via Shodan]" to get the names of other hosts in the sub-domain.





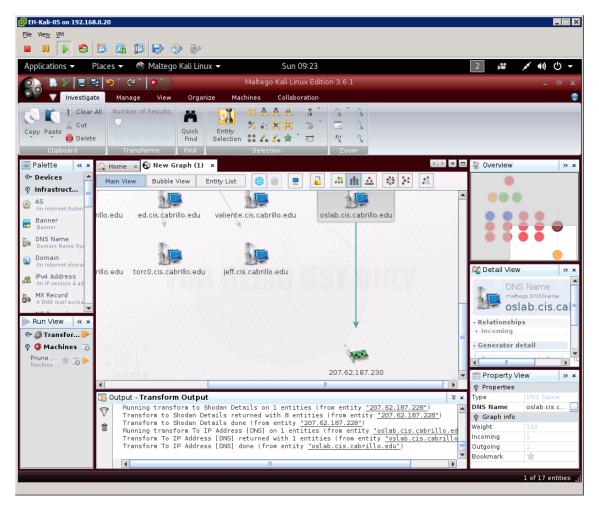
Notice we get 12 (the limit of the free version) hosts on the sub-domain.





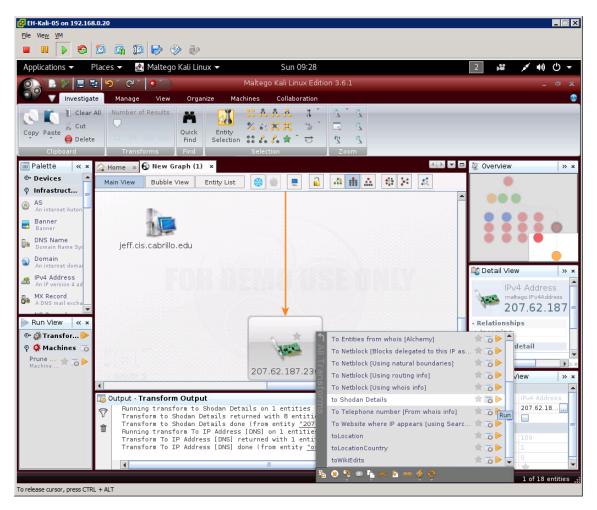
Select oslab and run the "To IP Address [DNS]" to get the IP address.





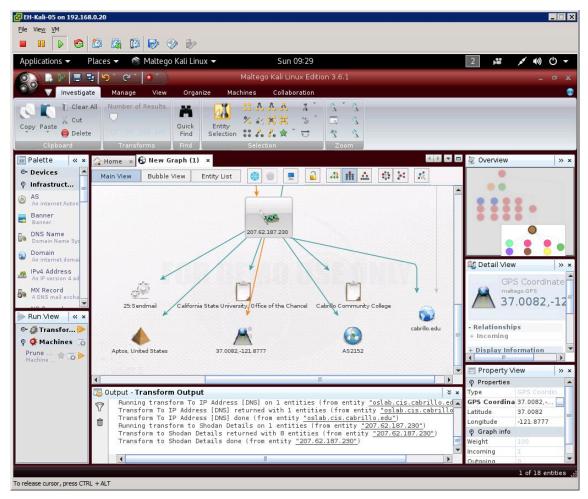
Notice we have the external IP address now.





Select oslab and run the "To IP Address [DNS]" to get the IP address.





Notice we have related port 25 (SMTP) info, geographic location, organizations, autonomous system number information.



Job Openings



Job title: IT Administrator

- Setup machines for new employees and troubleshoot software and hardware issues on Macs (imaging, Time Machine, remote management, etc)
- Troubleshoot networking issues and configure networking infrastructure and services (such as screencasting, interfacing with ISPs, WiFi)
- Manage and troubleshoot VoIP systems
- Take charge of new software releases and system upgrades, evaluate and install patches, and resolve software and hardware related problems
- · Perform system backups and recovery as needed
- Work closely with the DevOps team to fulfill business needs of various teams on an ongoing basis
- · Manage various peripherals for employees (printers, scanners, external hard drives)

Some skills we consider critical to being an IT Administrator:

- Familiarity with Linux systems (Ubuntu)
- Familiarity with file storage services (Box, Dropbox, S3)
- · Familiarity with OSX imaging
- 2+ years previous support experience (Apple Genius bar, IT administrator, etc)

http://www.indeed.com/

Job openings can reveal internal IT infrastructure



Job title: System Administrator

Typical Qualifications:		
Any combination of education, training and o demonstrates the following knowledge, skills Thorough knowledge of: 1. Cisco routing and switching 2. Windows 2008/2012 Server 3. Microsoft Exchange 4. Windows Software Update Services (WSU 5. Microsoft Internet Information Services (6. Microsoft SQL Server 7. VMware virtualization (Server and desktor 8. Nimble iSCSI SANs 9. Veeam Backup and Recovery	us) (IIS)	Job openings can reveal internal IT infrastructure
10. ShoreTel VoIP phone system 11. Desktop and server system deployment 12. Principles, practices, and techniques, <u>http://www.indeed.com/</u>	 VDI, routers, switches), security 2. Resolve problems with a wide vaprinters, SAN, NAS, etc.) 3. Perform project management inducting, contingency planning, r 4. Communicate effectively with all 	ariety of computer equipment (PCs, servers, cluding scheduling, developing critical paths, resource allocation, and team leadership I levels of management tinually changing demands or situations rate documentation working relationships

Highly Desired:

- CCNA Routing and Switching
 MCITP: Server Administrator on Windows Server 2008 or 2012.
- 3. VMware VCP 5-DCV, VCP 6-DCV?



Activity

Browse the System Administrator job listings on monster.com or indeed.com.

Did you find any specific system or network information?

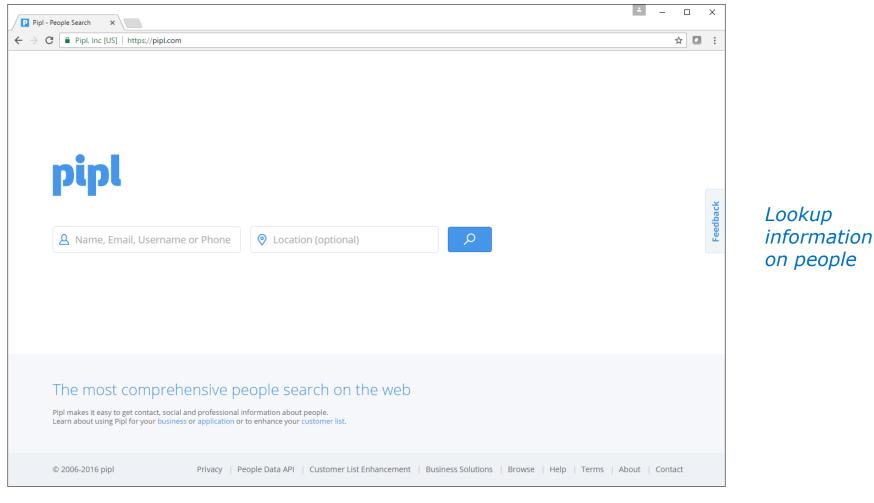
If so put what you found in the chat window



pipl



pipl





Activity

Try using pipl:

https://pipl.com/

on yourself.

Try it on your:

- name
- phone number
- email address
- username

Any observations?

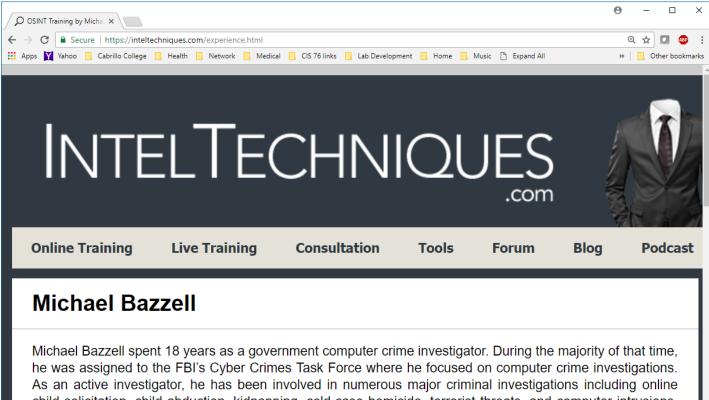
Write any observations in the chat window



IntelTechniques



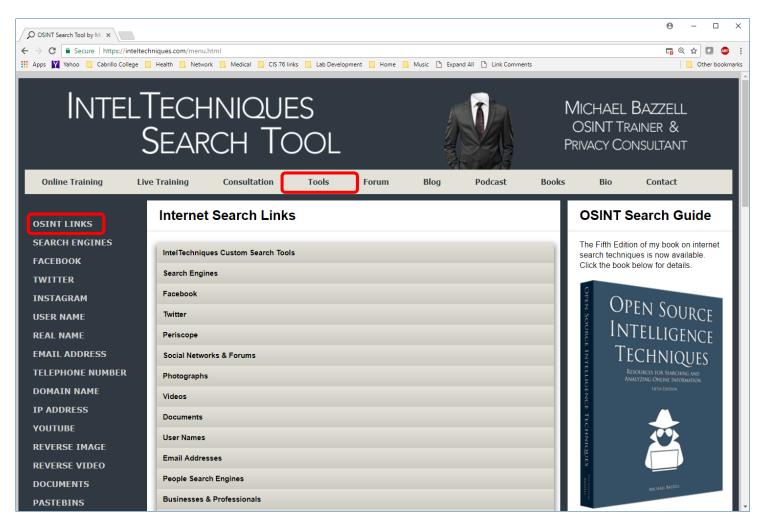
IntelTechniques



As an active investigator, he has been involved in numerous major criminal investigations including online child solicitation, child abduction, kidnapping, cold-case homicide, terrorist threats, and computer intrusions. He has trained thousands of individuals in the use of his investigative techniques. He also served as the technical advisor for the television hacker drama "Mr. Robot". His books "**Open Source Intelligence Techniques**" and "**Hiding from the Internet**" have been best sellers in both the United States and Europe. Michael currently works and resides in Washington, D.C., and also serves as an advisor for the privacy app Sudo.



IntelTechniques



https://inteltechniques.com/

Lots and lots and lots of open source tools!



IntelTechniques

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Online Training	Live Training	Consultation Tools	Forum Blog	Podcast	Books	Bio	Contact		
	First Name	Last Name	Populate All						
SEARCH ENGINES	First Name	Last Name	Populate All						
TWITTER	First Name First Name	Last Name Last Name	Pipl ThatsThem						
INSTAGRAM	First Name	Last Name	Spokeo						
USER NAME	First Name First Name	Last Name	Reverse Genie Advanced Check						
REAL NAME	First Name	Last Name	Yasni						
EMAIL ADDRESS	First Name First Name	Last Name Last Name	Radaris ZabaSearch						
TELEPHONE NUMBER	First Name	Last Name	Intelius						
DOMAIN NAME	First Name First Name	Last Name	OneRep FamilyTreeNow						
IP ADDRESS	First Name	Last Name	TruePeople						
YOUTUBE	First Name	Last Name	Quanki						
REVERSE IMAGE	First Name First Name	Last Name	WebMii						
REVERSE VIDEO	First Name	Last Name	LinkedIn						
DOCUMENTS	First Name	Last Name	Twitter						

https://inteltechniques.com/

Lots and lots and lots of open source tools!



Activity

Try <u>https://inteltechniques.com/menu.html</u>

Select:

- OSINT LINKS (on left panel)
- Then select: Photographs (in middle pane)
- Then scroll down and select: Foto Forensics

Upload this photograph: https://simms-teach.com/docs/cis76/pic02.jpg

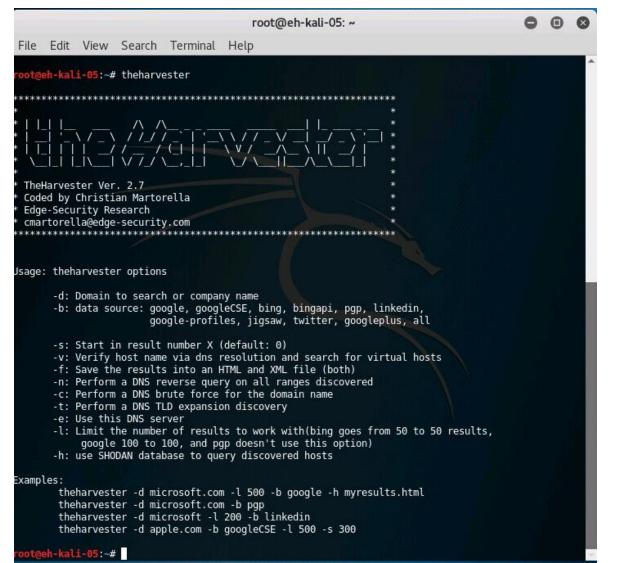
Put the date and time that photo was taken and the camera model in the chat window



Harvester



theharvester



The Harvester is run from the command line on Kali



theharvester -d mit.edu -l 100 -b all

🛃 EH-Ka	li-05 on 192.168.0.20			
File Vie				
Applic	ations 👻 Places 👻 ⊾ Terminal 👻	Tue 16:02	1,"	≠ U) (U →
		root@eh-kali-05: ~	0	0.0
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	root@eh-kali-05:~#			^
	<pre>root@eh-kali-05:~# theharvester -d mit.e</pre>	edu -l 100 -b all		
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M				
<u> </u>	* TheHarvester Ver. 2.7			
3	* Coded by Christian Martorella * Edge-Security Research	*		
	<pre>* cmartorella@edge-security.com ************************************</pre>	*		
31				
F	Full harvest			
	<pre>[-] Searching in Google Searching 0 results</pre>			
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	<pre>[-] Searching in PGP Key server [-] Searching in Bing</pre>			
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	Searching 150 results			
	[+] Emails found:			
	ariely@mit.edu			-

Options:

-d specifies the domain

-l limits the number of results

-b selects the data source



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	root@eh-kali-05: ~	0	
File Edit View Search Terminal Help			
[+] Emails found:			
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nwass@mit.edu			
rotem@csail.mit.edu			
rothblum@csail.mit.edu speakman@mit.edu			
techcash@mit.edu			
tickets@mit.edu			
[+] Hosts found in search engines:			
[-] Resolving hostnames IPs			
192.30.252.154:appinventor.mit.edu			
18.9.44.141:architecture.mit.edu			
104.196.144.144:arts.mit.edu			
18.9.44.134:be.mit.edu			

emails found



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18.85.11.147:blogdex.media.mit.edu 18.9.44.108:career-fair.mit.edu		
18.9.61.41:careers.mit.edu		
12.188.251.201:catalog.mit.edu		
18.9.44.155:cee.mit.edu		
18.9.60.164:cheme.mit.edu		
18.9.44.65:chemistry.mit.edu 18.187.1.155:classics.mit.edu		
18.9.22.85:connect.mit.edu		
18.181.0.46:courseroad.mit.edu		
18.93.5.75:crispr.mit.edu		
128.30.2.121:csail.mit.edu		
72.32.16.107:daper.mit.edu 18.9.61.41:dmse.mit.edu		
18.9.49.39:dspace.mit.edu		
18.1.36.24:economics.mit.edu		
104.196.100.49:energy.mit.edu		
18.9.60.164:engineering.mit.edu		
18.7.25.195:esp.mit.edu 54.172.17.68:executive.mit.edu		
18.9.61.179:eyeriss.mit.edu		
18.9.61.41:gradadmissions.mit.edu		
192.52.65.1:haystack.mit.edu		
18.9.62.146:help.mit.edu		
18.9.61.41:institute-events.mit.e		

hosts found in search engines



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	destinyeventtracker.com			
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192.30.252.154	support.ooma.com			
192.30.252.154	slackthemes.net zengms.com			
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	indiafestmilwaukee.org			
192.30.252.154	marshall-starke.org			
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192.30.252.154	owin.org			
192.30.252.154	implbits.com			
192.30.252.154	donluchosinseattle.com			
192.30.252.154	mongoosejs.com			
192.30.252.154	landlordwatchlist.com			
192.30.252.154	csslint.net			
192.30.252.154	burningsail.com			
192.30.252.154 192.30.252.154	cleanflight.com xenia.jp			
192.30.252.154	ssrgen.harusamex.com			
192.30.252.154	steam.tools			
192.30.252.154	otranscribe.com			
192.30.252.154	octoprint.org			
192.30.252.154	teamwiggins.co			
192.30.252.154	tflearn.org			
192.30.252.154	projectinclude.org			
192.30.252.154	varianceexplained.org			
192.30.252.154	getfuelux.com			
192.30.252.154	zooburst.com			



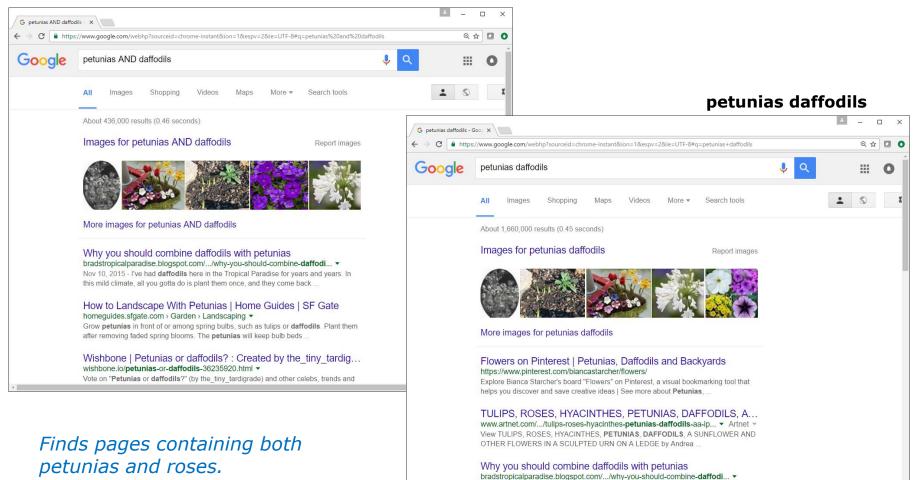
Google Hacking

Cabrillo College

CIS 76 - Lesson 4

Google Hacking with AND (or space) operator

petunias AND daffodils

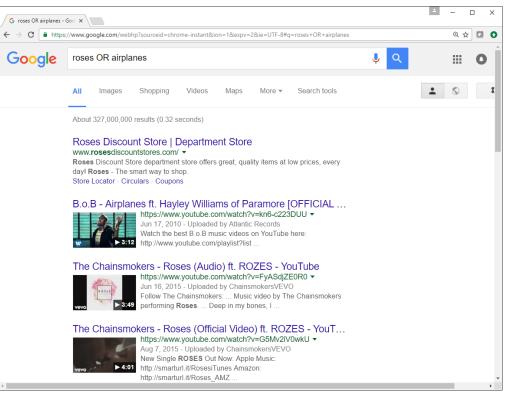


Nov 10, 2015 - I've had daffodils here in the Tropical Paradise for years and years. In



Google Hacking with OR (or |) operator

roses OR airplanes



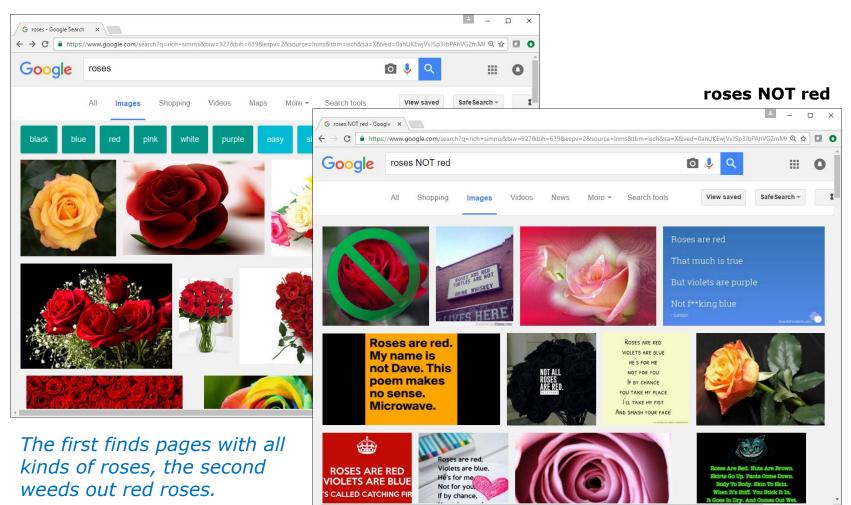
Finds pages with roses or pages with airplanes.



Google Hacking with NOT (or -) operator

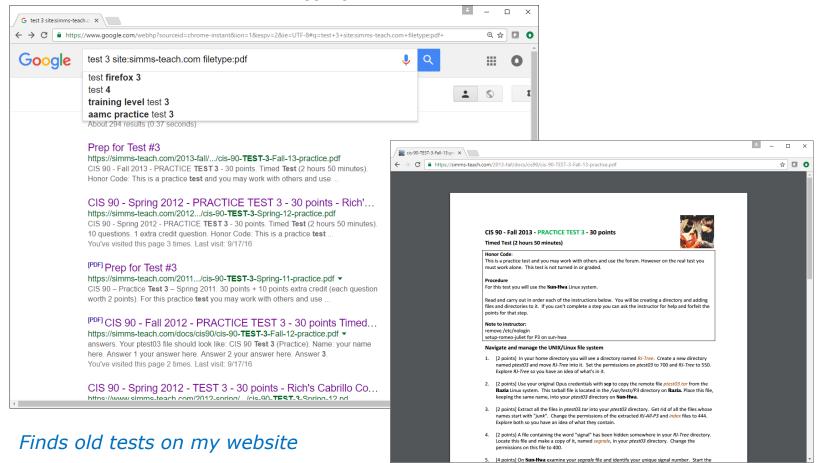
roses

bills Collese



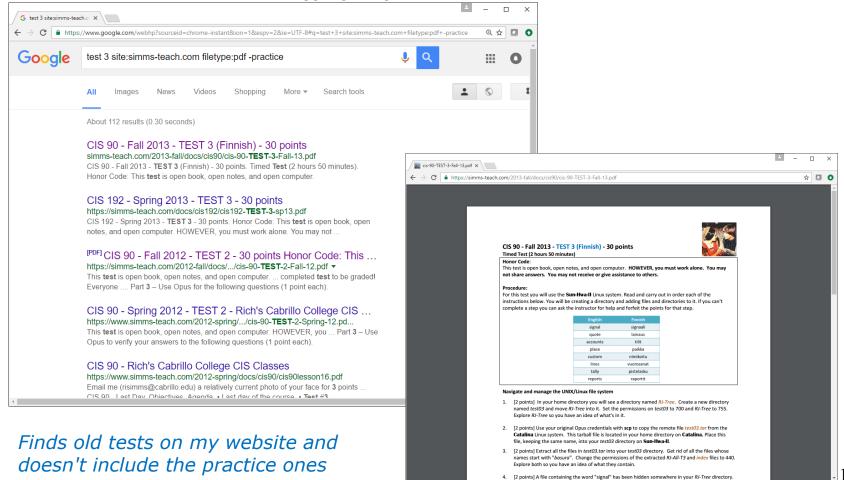
Google Hacking with site: and filetype: operators

test 3 site:simms-teach.com filetype:pdf



Google Hacking with site: and filetype: operators

test 3 site:simms-teach.com filetype:pdf -practice



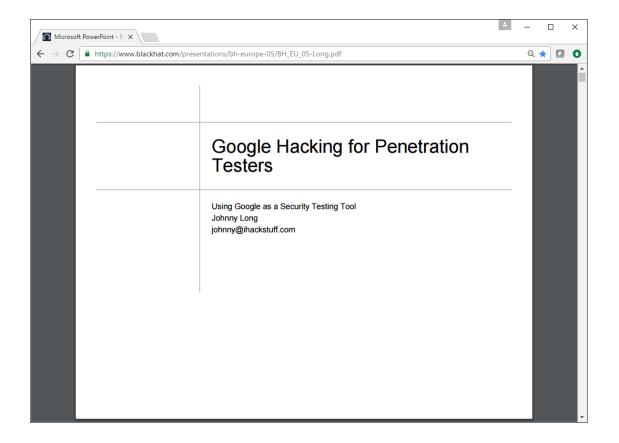
ills Colle

Google Hacking: The hidden face of Google

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\leftrightarrow	C 🛈 resources.infosecinstitute.com/google-hacking-the-hidden-face-of-google-2/	⊕ ☆		0
	STITUTE TOPICS CONTRIBUTORS ARCHIVE CAREERS JOB BOARD SIQ PHISHING SIMULATOR		۹	1 1
	No need for an introduction, Google is quite possibly the more powerful search engine used today, even used sometimes to			
	check our connectivity; except that the power of the single search bar on the top of Google has become a source of concern f	or		
	many, and if not they should and we will see why!			
	In addition to be one of the most powerful information databases. Google can be used to find much more than what we ever			
	should find. Coogle can find things like sensitive files, web vulnerabilities; it allows the identification of operating systems and			
	even be used to find passwords, databases and even whole mailbox content Coogle understands which operators to target i			
	order to get precisely what we are seeking; I'll try to detail the most important of them.			
	order to get precisely what we are seeking, in aly to detail the most important of them.			
	You have to know that queries on Google are not case sensitive, thus there is no difference between lower or upper cases or e	ven		
	a combination of both: Security, SECURITY and SeCuriTY will return exactly the same result, but this rule has an exception wh	en		
	using logical operators.			
	Logical operators and symbols			
	Google can understand three logical operators: AND, NOT and OR, so Google recognizes the "OR" as the operator and "Or", "oR	" or		
	"or" as search elements or keywords.			
4				F .



Google Hacking by Johnny Long





Advanced Operators at a Glance

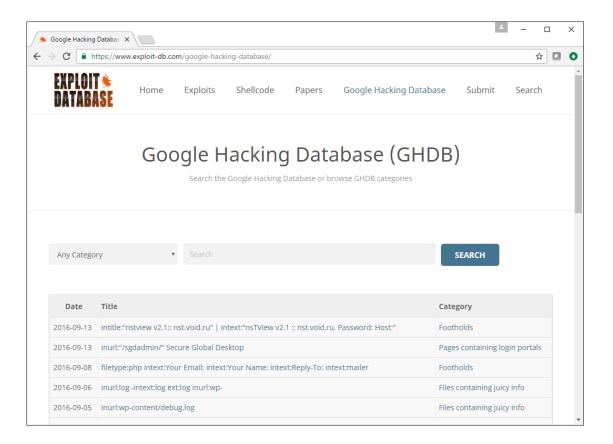
Some operators can only be used to search specific areas of Google, as these columns show.

	Operator		Purpose Mixes with other			Does	search wo	orkin /
Advanced			operators?	used alone?	Web	Images	Groups	News
operators	intitle	Search page title	yes	yes	yes	yes	yes	yes
can be	allintitle	Search page title	no	yes	yes	yes	yes	yes
in some	inurl	Search URL	yes	yes	yes	yes	not really	like intitle
cases.	allinurl	Search URL	no	yes	yes	yes	yes	like intitle
	filetype	Search specific files	yes	no	yes	yes	no	not really
	allintext	Search text of page only	not really	yes	yes	yes	yes	yes
	site	Search specific site	yes	yes	yes	yes	no	not really
In other	link	Search for links to pages	no	yes	yes	no	no	not really
cases,	inanchor	Search link anchor text	yes	yes	yes	yes	not really	yes
mixing	numrange	Locate number	yes	yes	yes	no	no	not really
should be	daterange	Search in date range	yes	no	yes	not really	not really	not really
avoided.	author	Group author search	yes	yes	no	no	yes	not really
	group	Group name search	not really	yes	no	no	yes	not really
	insubject	Group subject search	yes	yes	like intitle	like intitle	yes	like intitle
	msgid	Group msgid search	no	yes	not really	not really	yes	not really

https://www.blackhat.com/presentations/bh-europe-05/BH_EU_05-Long.pdf



Google Hacking On Exploit Database





Google Hacking Database Activity

https://www.exploit-db.com/google-hacking-database/

Pick one of the Google Hacking categories such as:

- 1. Sensitive directories
- 2. Network or vulnerability data
- 3. Various online devices
- 4. Web server detection
- 5. Files containing passwords
- 6. File containing juicy information
- 7. Or any of the other categories ...

Start exploring.

Put anything you find that is interesting (and not offensive) in the chat window



Social Engineering



- Manipulating humans to get information or access.
- Fraud, scams and con artists have been around a long time. Way before computers were invented
- Difficult to protect against. Because they take advantage of a false trust their targets have in them.

con man

Back formation of "confidence man". One who gains the trust, or "confidence", of his victims (often called **mark**s) in order to manipulate, steal from, or otherwise predate upon them. (U.S. slang, late 1800s)

Don't write him a check, he's a con man .



Social engineering is easier, faster and far less costly than:

- Researching, reverse-engineering, and exploiting zero-day vulnerabilities.
- Purchasing zero-day exploits on the dark web.
- Conducting time-consuming brute force wordlist or namespace attacks.
- Waiting months for a firewall to be temporarily turned off.
- Doing network vulnerability scans and searching exploit databases to find one that actually works.



Some examples:

- Spy gear impersonating a IT staff member then placing a hardware key logger on a sensitive computer.
- (Spear) phishing crafting authentic looking scam emails with malicious links or attachments.
- Vishing impersonating traveling company VIP calling "their" help desk to urgently get login credentials for an important meeting.
- Shoulder surfing (also with binoculars, telescopes)
- Dumpster diving (waste baskets, trash cans)
- Tailgating (piggybacking)



https://www.keelog.com

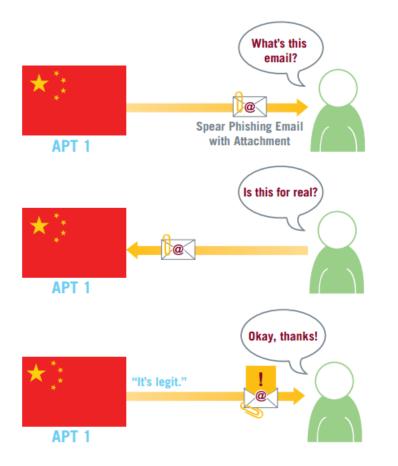


Mandiant sampling of APT1 malicious zip file attachments:

2012ChinaUSAviationSymposium.zip Employee-Benefit-and-Overhead-Adjustment-Keys.zip MARKET-COMMENT-Europe-Ends-Sharply-Lower-On-Data-Yields-Jump.zip Negative Reports Of Turkey.zip New Technology For FPGA And Its Developing Trend.zip North Korean launch.zip Oil-Field-Services-Analysis-And-Outlook.zip POWER GEN 2012.zip Proactive Investors One2One Energy Investor Forum.zip Social-Security-Reform.zip South China Sea Security Assessment Report.zip Telephonics Supplier Manual v3.zip The Latest Syria Security Assessment Report.zip Updated Office Contact v1.zip Updated Office Contact v2.zip Welfare Reform and Benefits Development Plan.zip



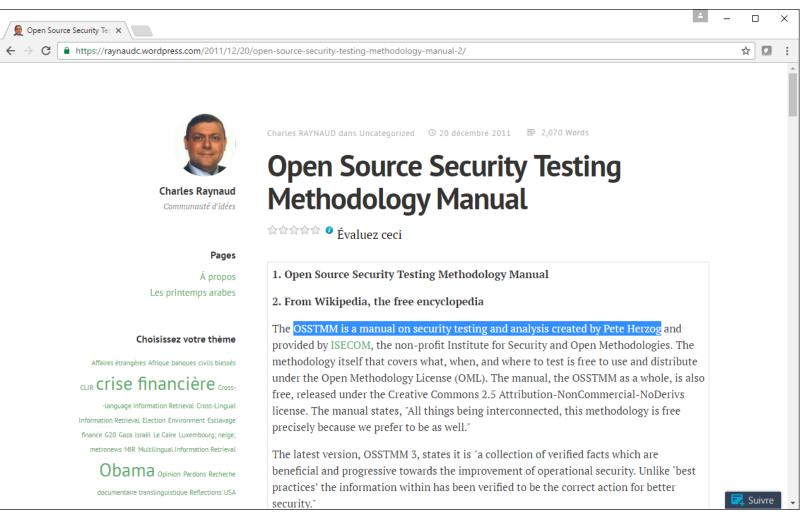
Mandiant APT1 phishing observations:



The example file names include military, economic, and diplomatic themes, suggesting the wide range of industries that APT1 targets. Some names are also generic (e.g., "updated_office_contact_v1.zip") and could be used for targets in any industry. On some occasions, unsuspecting email recipients have replied to the spear phishing messages, believing they were communicating with their acquaintances. In one case a person replied, "I'm not sure if this is legit, so I didn't open it." Within 20 minutes, someone in APT1 responded with a terse email back: "It's legit."



Open-Source Security Testing Methodology Manual





Open-Source Security Testing Methodology Manual

Rules of Engagement

• • •

3. Contracts and Negotiations

From our textbook: "As a security tester never use social engineering tactics without written permission from the person that hired you."

••••

3.6

The contract must include clear, specific permissions for tests involving survivability failures, denial of service, process testing, or social engineering.

• • •

7. Testing

• • •

- 7.3 Social engineering and process testing may only be performed in non-identifying statistical means against untrained or non-security personnel.
- 7.4 Social engineering and process testing may only be performed on personnel identified in the scope and may not include customers, partners, associates, or other external entities.



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OSSTMM 2.1. - The Open Source Security Testing Methodology Manual 23 August 2003, re-published 06 September 2005



Social Engineering Target Template

Target Definition

E-mail	Telephone	Description
	E-mail	E-mail Telephone

http://docplayer.net/1016862-Open-source-security-testing-methodology-manual.html



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Social Engineering Telephone Attack Template

Attack Scenario	
Telephone #	
Person	
Description	
Results	

Attack Scenario			
elephone #			
Person			
Description			
esults			



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Social Engineering E-mail Attack Template

Attack Scenario	
Email	
Person	
Person Description	
Results	
Results	

Attack Scenario	
Email	
Person	
Person Description	
Results	



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ISECOM

Social Engineering Template

Company	
Company Name	
Company Address	
Company Telephone	
Company Fax	
Company Webpage	
Products and Services	
Primary Contacts	
Departments and Responsibilities	
Company Facilities Location	
Company History	
Partners	
Resellers	
Company Regulations	
Company Info security Policy	
Company Traditions	
Company Job Postings	
Temporary Employment Availability	
Typical IT threats	

People	
Employee Information	
Employee Names and Positions	
Employee Place in Hierarchy	
Employee Personal Pages	
Employee Best Contact Methods	
Employee Hobbies	
Employee Internet Traces (Usenet, forums)	
Employee Opinions Expressed	
Employee Friends and Relatives	
Employee History (including Work History)	
Employee Character Traits	
Employee Values and Priorities	
Employee Social Habits	
Employee Speech and Speaking Patterns	
Employee Gestures and Manners	



"Katie guest" hack: 3:30 to 9:55 "Help desk" hack: 9:55 to 10:46 Advice: 10:46 to 11:28 "Sales" hack: 11:28 to 12:44 More advice: 12:44 to 13:51

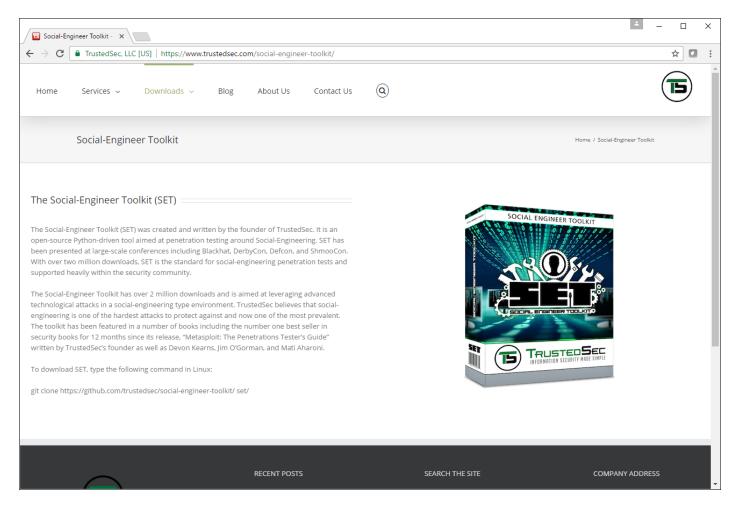


David Kennedy created the Social Engineering Toolkit (SET)

https://www.youtube.com/watch?v=UJdxrhERDyM



Social Engineering Toolkit



David Kennedy created the Social Engineering Toolkit (SET)

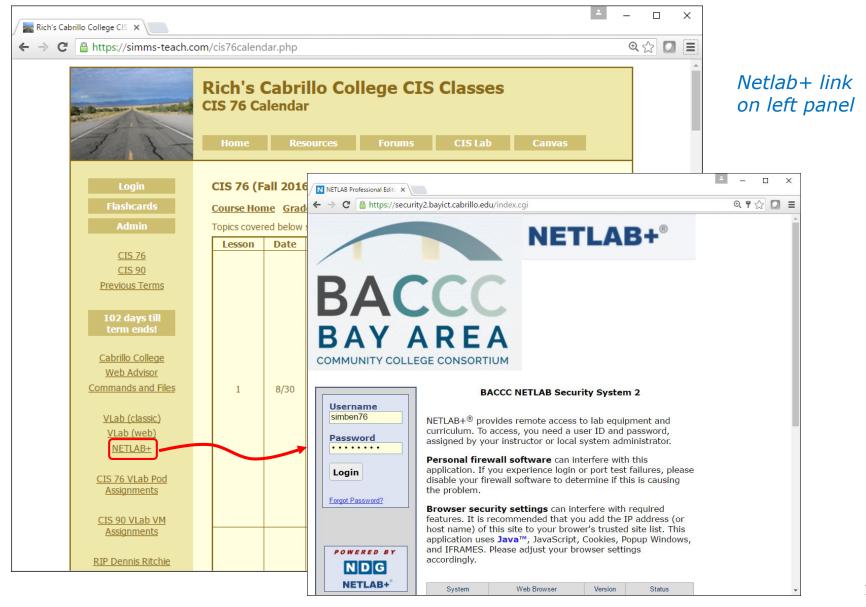


Netlab+ Activity

NDG EH Lab 2 Social Engineering Toolkit

Assignment







Lab Assignments

Pearls of Wisdom:

- Don't wait till the last minute to start.
- The *slower* you go the *sooner* you will be finished.
- A few minutes reading the forum can save you hour(s).



- Line up materials, references, equipment, and software ahead of time.
- It's best if you fully understand each step as you do it. Refer back to lesson slides to understand the commands you are using.
- Use Google for trouble-shooting and looking up supplemental info.
- Keep a growing cheat sheet of commands and examples.
- Study groups are very productive and beneficial.
- Use the forum to collaborate, ask questions, get clarifications, and share tips you learned while doing a lab.
- Plan for things to go wrong and give yourself time to ask questions and get answers.
- Late work is not accepted so submit what you have for partial credit.

Wrap up



Next Class

Assignment: Check the Calendar Page on the web site to see what is due next week.



Quiz questions for next class:

- Use telnet to check the headers on the umich.edu web server. What is the value of the X-Powered-By header?
- What city and country is the IPv4 address 61.180.150.240 associated with?
- What is the name of the person who authored the SET (Social Engineering Toolkit)?



Backup