



## Rich's lesson module checklist

*Last updated 9/20/2016*

- Slides and lab posted
- WB converted from PowerPoint
- Print out agenda slide and annotate page numbers
  
- Flash cards
- Properties
- Page numbers
- 1<sup>st</sup> minute quiz
- Web Calendar summary
- Web book pages
- Commands
  
- Lab 4 posted and tested
  
- Backup slides, whiteboard slides, CCC info, handouts on flash drive
- Spare 9v battery for mic
- Key card for classroom door

**Evading Network  
Devices**

**TCP/IP**

**Cryptography**

**Network and  
Computer Attacks**

**Hacking Wireless  
Networks**

## **CIS 76 Ethical Hacking**

**Hacking  
Web Servers**

**Footprinting and  
Social Engineering**

**Port Scanning**

**Embedded Operating  
Systems**

**Enumeration**

**Desktop and Server  
Vulnerabilities**

**Scripting and  
Programming**

### **Student Learner Outcomes**

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.

# Introductions and Credits



Rich Simms

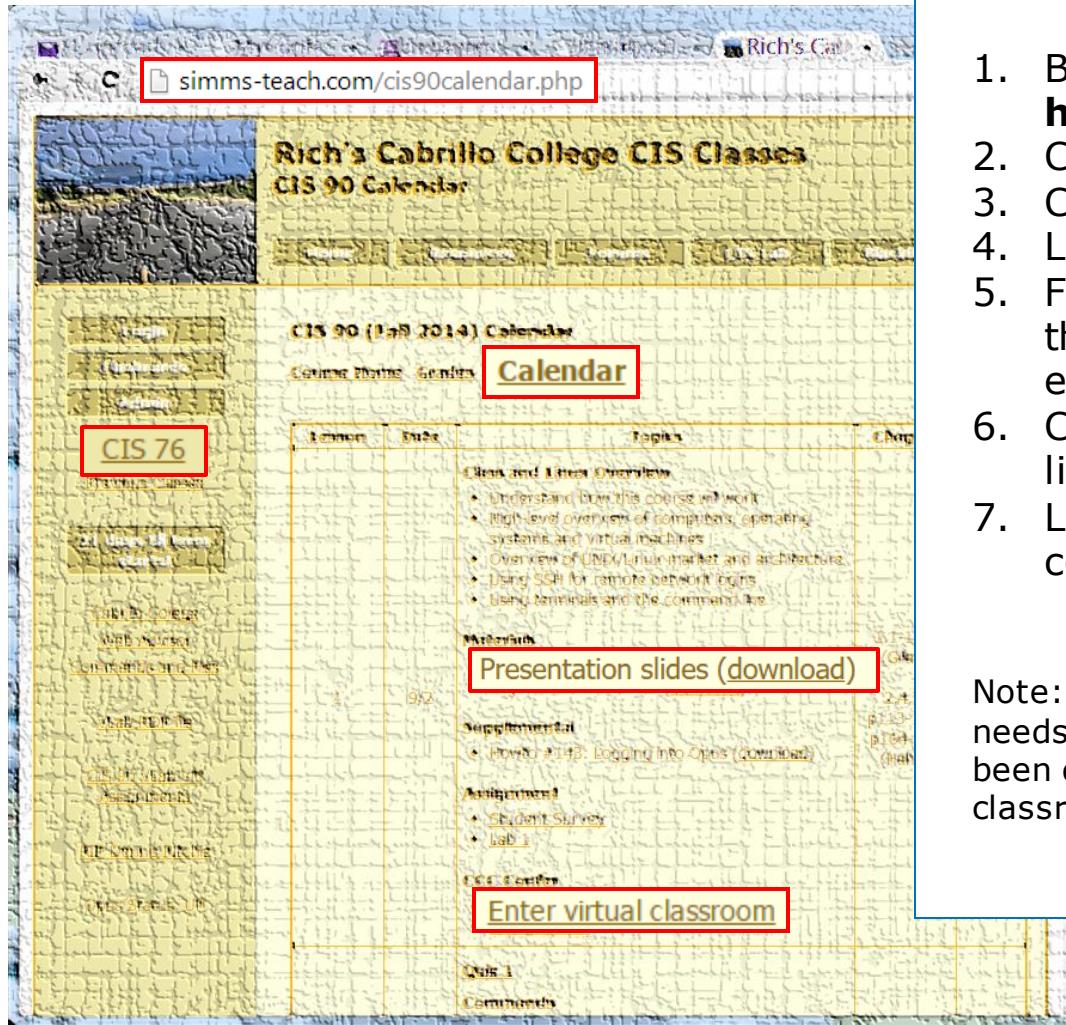
- HP Alumnus.
- Started teaching in 2008 when Jim Griffin went on sabbatical.
- Rich's site: <http://simms-teach.com>

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!



## Student checklist for attending class



The screenshot shows a web browser window with the URL [simms-teach.com/cis90calendar.php](http://simms-teach.com/cis90calendar.php) in the address bar. The page title is "Rich's Cabrillo College CIS Classes". The sidebar on the left has a "CIS 76" link. The main content area has a "Calendar" link. In the center, there is a table with columns "Lesson", "Date", and "Topics". One row is visible with the following details:

Lesson	Date	Topics
Lesson 1	Sept 2	Class and Linux Overview <ul style="list-style-type: none"><li>Understand how this course will work</li><li>High-level overview of computers, operating systems and virtual machines</li><li>Overview of UDEV Linux kernel and architecture</li><li>Using SSH for remote network logins</li><li>Using terminals and the command line</li></ul>

Below the table, there are sections for "Materials", "Presentation slides (download)" (which is highlighted with a red box), "Supplemental", "Assignments", and "Class Materials". At the bottom of the page, there is a "Enter virtual classroom" button (also highlighted with a red box).

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

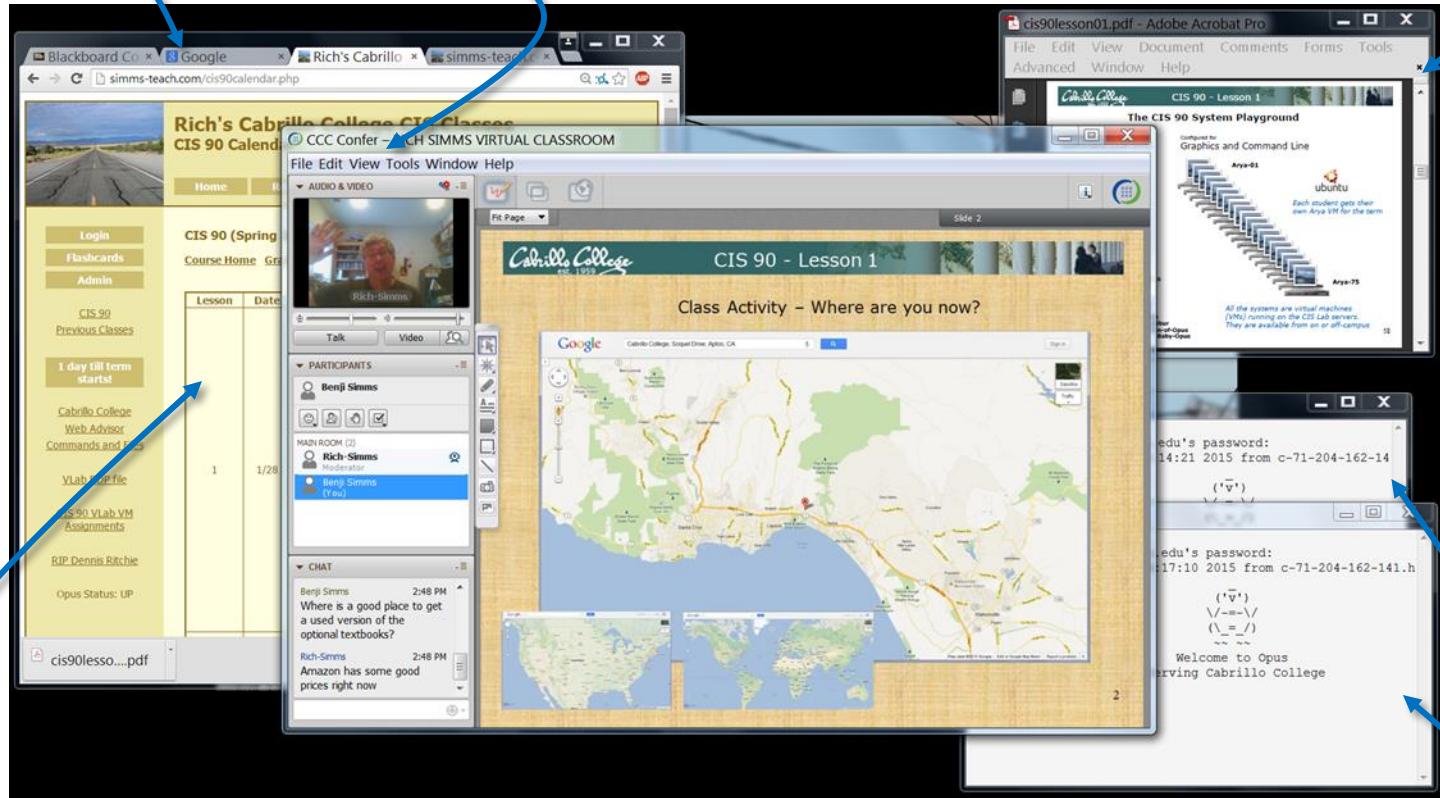


## Student checklist for suggested screen layout

Google

CCC Confer

Downloaded PDF of Lesson Slides



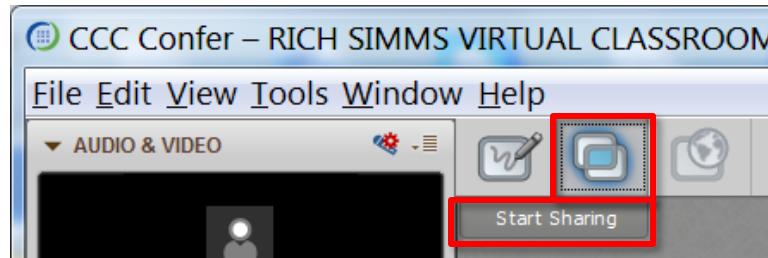
CIS 76 website Calendar page

One or more login sessions to Opus

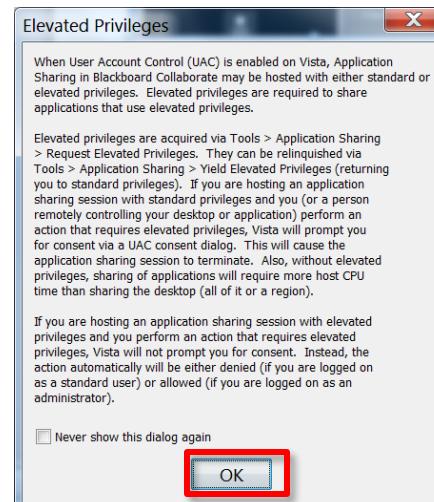


## Student checklist for sharing desktop with classmates

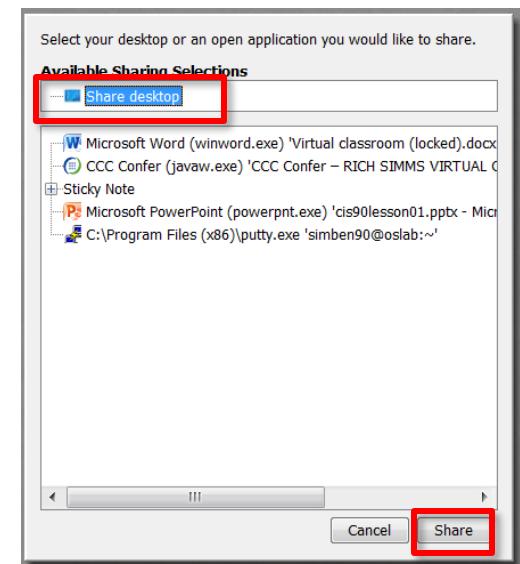
1) Instructor gives you sharing privileges.



2) Click overlapping rectangles icon. If white "Start Sharing" text is present then click it as well.



3) Click OK button.



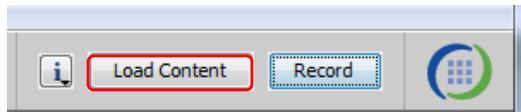
4) Select "Share desktop" and click Share button.



## Rich's CCC Confer checklist - setup

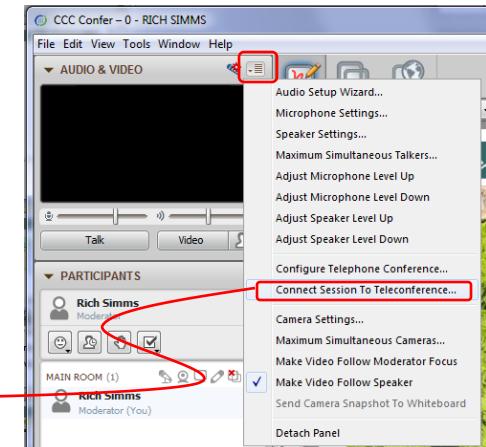
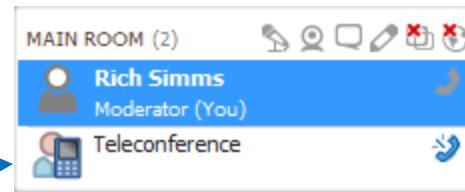


[ ] Preload White Board



[ ] Connect session to Teleconference

*Session now connected  
to teleconference*



[ ] Is recording on?



*Red dot means recording*



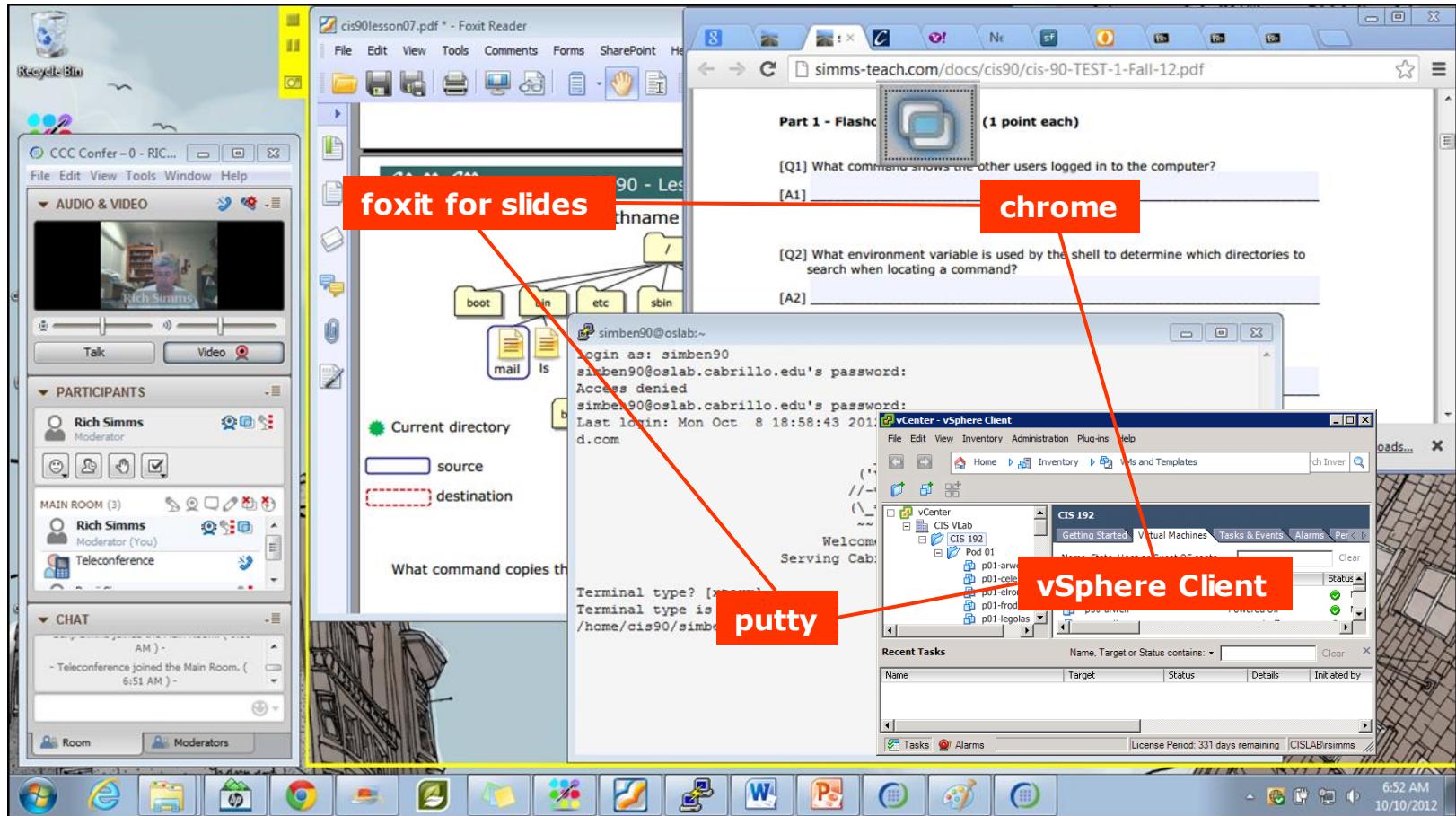
[ ] Use teleconferencing, not mic

*Should be grayed out*

*Should change  
from phone  
handset icon to  
little Microphone  
icon and the  
Teleconferencing ...  
message displayed*

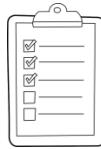


## Rich's CCC Confer checklist - screen layout

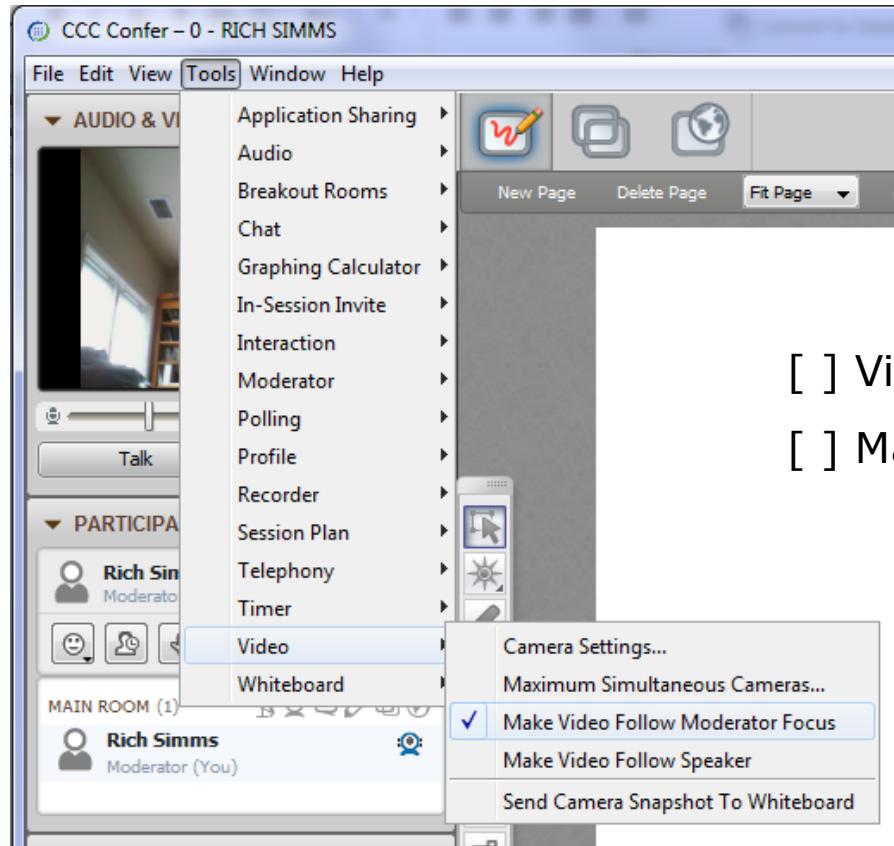


[ ] layout and share apps





## Rich's CCC Confer checklist - webcam setup

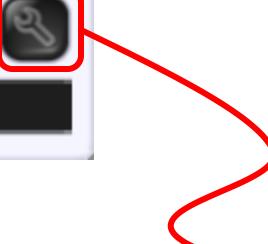
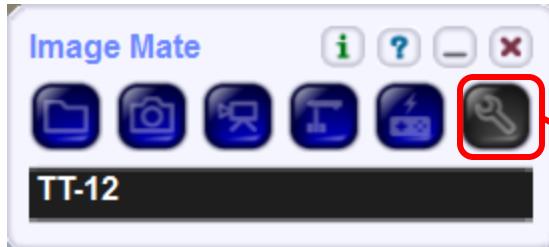


[ ] Video (webcam)

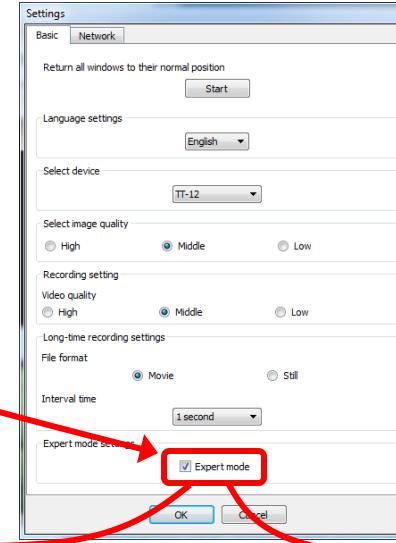
[ ] Make Video Follow Moderator Focus



## Rich's CCC Confer checklist - Elmo



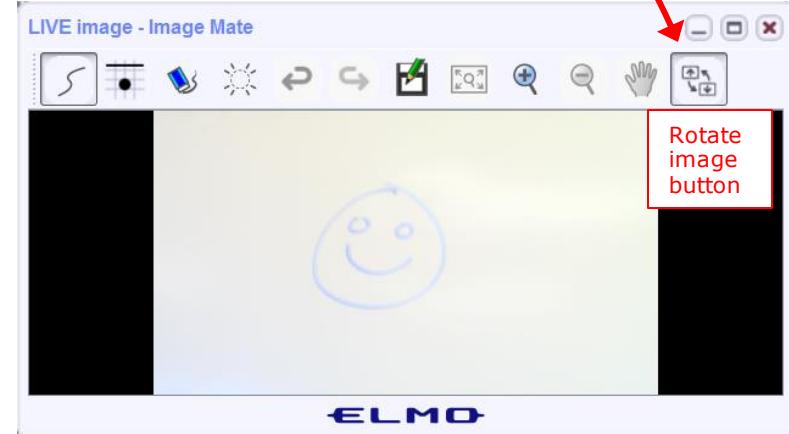
Elmo rotated down to view side table



*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!*

Elmo rotated up to view white board



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



## Rich's CCC Confer checklist - universal fixes

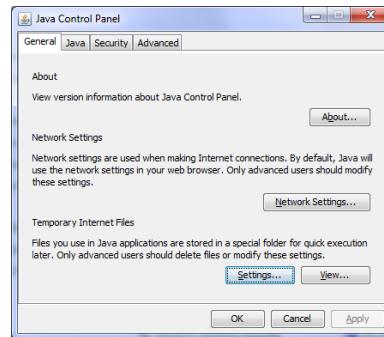
Universal Fix for CCC Confer:

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

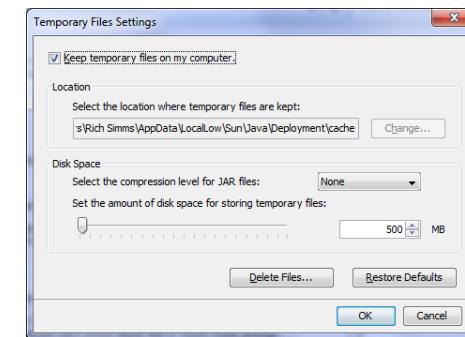
Control Panel (small icons)



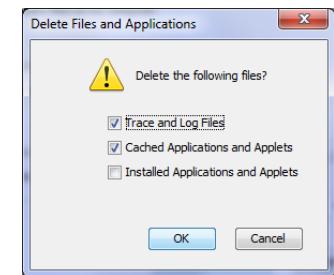
General Tab > Settings...



500MB cache size



Delete these



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.*



Instructor: **Rich Simms**

Dial-in: **888-886-3951**

Passcode: **136690**



Ryan



Jordan



Takashi



Karl-Heinz



Sean



Benji



Joshua



Brian



Tess



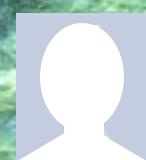
Jeremy



David H.



Roberto



Nelli



Mike C.



Deryck



Alex



Michael W.



Carter



Thomas



Wes



Jennifer



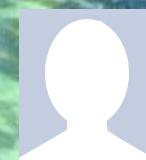
Marcos



Tim



Luis



Dave R.

## First Minute Quiz

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

**Use CCC Confer White Board**

**email answers to: [risimms@cabrillo.edu](mailto:risimms@cabrillo.edu)**

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

## Footprinting and Social Engineering

Objectives	Agenda
<ul style="list-style-type: none"><li>• Learn to use various web tools for conducting reconnaissance.</li><li>• Explore gathering DNS information.</li><li>• Try some Google Hacking.</li><li>• Understand what doxing is.</li><li>• Understand the different types of social engineering.</li></ul>	<ul style="list-style-type: none"><li>• Quiz</li><li>• Questions</li><li>• Housekeeping</li><li>• Footprinting and Reconnaissance</li><li>• Social Engineering</li><li>• Assignment</li><li>• Wrap up</li></ul>

# 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



# Questions

How this course works?

Past lesson material?

Previous labs?

Chinese  
Proverb

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傻瓜永遠。

*He who asks a question is a fool for five minutes; he who does not ask a question remains a fool forever.*

# Housekeeping



## Housekeeping

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

## Perkins/VTEA Survey

**phpBB®** Cabrillo College: Computer and Information Systems  
Forum for students in the Computer Networking and System Administration and/or Computer Support Specialist programs

Search...

Quick links [FAQ](#)

[Board index](#) < Cabrillo College Fall 2015 Courses < CIS 90 - Fall 2015

[Post Reply](#)

Carl D. Perkins Vocational and Technical Education Act

5 posts • Page 1 of 1

**Carl D. Perkins Vocational and Technical Education Act**  
by [Rich Simms](#) • Tue Sep 22, 2015 2:34 pm

The Carl D. Perkins Vocational and Technical Education Act was originally authorized by Congress in 1984. It was reauthorized in 1998 and again in 2006. This act provides federal funding for improving career technical education (CTE) within the United States in order to help the economy.

For Cabrillo College to receive a portion of this funding students in technical classes must fill out a survey. The more surveys completed the more funds the college will receive. The survey only needs to be completed once per term by each student.

This survey can be completed online using web advisor:

[Log on to WEBADVISOR at https://wave.cabrillo.edu](#)

Select "STUDENTS: Click Here" (navy blue bar)

- Under "Academic Profile" Click on "Student Update Form"
- Use drop down list under "Select the earliest term for which you are registered" and click on the current term.
- Select "SUBMIT"

Scroll down to the "Career Technical Information"

- Answer questions by clicking on the circle to the left of your "Yes" or "No" answers
- You can get details about a question by clicking on blue underlined phrase
- After answering all questions Select "SUBMIT"

Then "LOG OUT"

Thank you for taking a few minutes to help Cabrillo College CS/CIS programs!

- Rich

<http://oslab.cis.cabrillo.edu/forum/viewtopic.php?f=121&t=4176>

*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 currently receiving benefits from:

<input type="radio"/> Yes	TANF/CALWORKS
<input checked="" type="radio"/> No	

<input type="radio"/> Yes	SSI (Supplemental Security Income)
<input checked="" type="radio"/> No	

<input type="radio"/> Yes	GA (General Assistance)
<input checked="" type="radio"/> No	

Does your [income](#) qualify you for a fee waiver?

<input type="radio"/> Yes	
<input checked="" type="radio"/> No	

Are you a single parent with custody of one or more minor children?

<input type="radio"/> Yes	
<input checked="" type="radio"/> No	

Are you a [displaced homemaker](#) attending Cabrillo to develop job skills?

<input type="radio"/> Yes	
<input checked="" type="radio"/> No	

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?

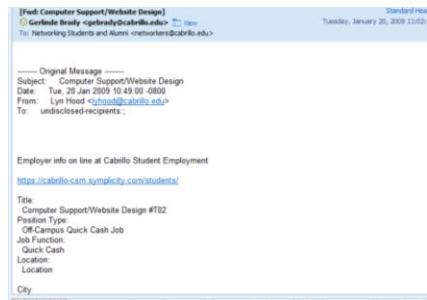
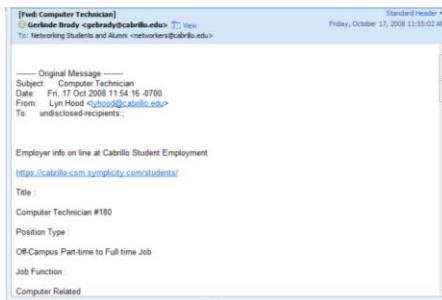
<input type="radio"/> Yes	
<input checked="" type="radio"/> No	

*Don't forget to  
change your  
default password  
on Opus*

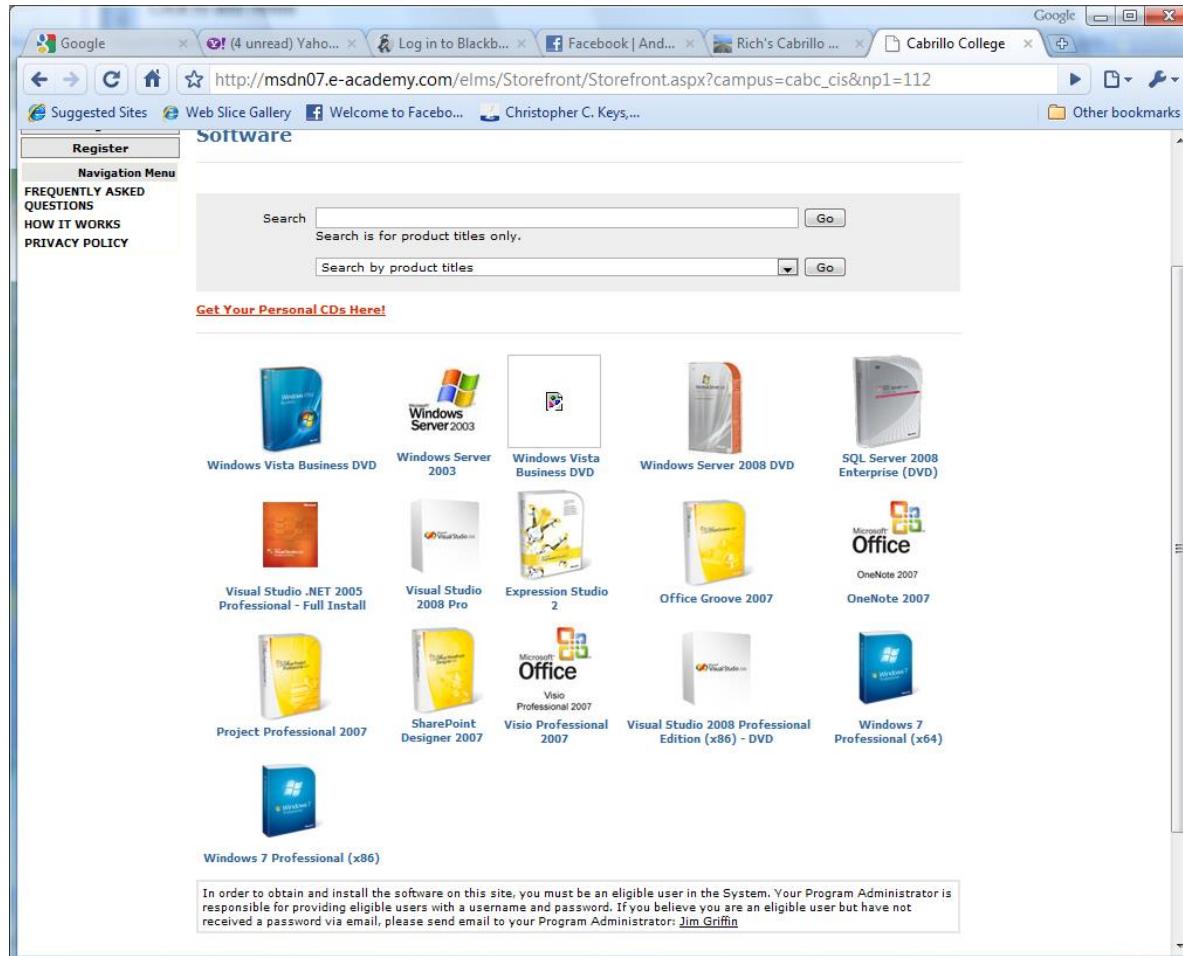
# Cabrillo Networking Program Mailing list

Subscribe by sending an email (no subject or body) to:  
**networkers-subscribe@cabrillo.edu**

- Program information
- Certification information
- Career and job information
- Short-term classes, events, lectures, tours, etc.
- Surveys
- Networking info and links



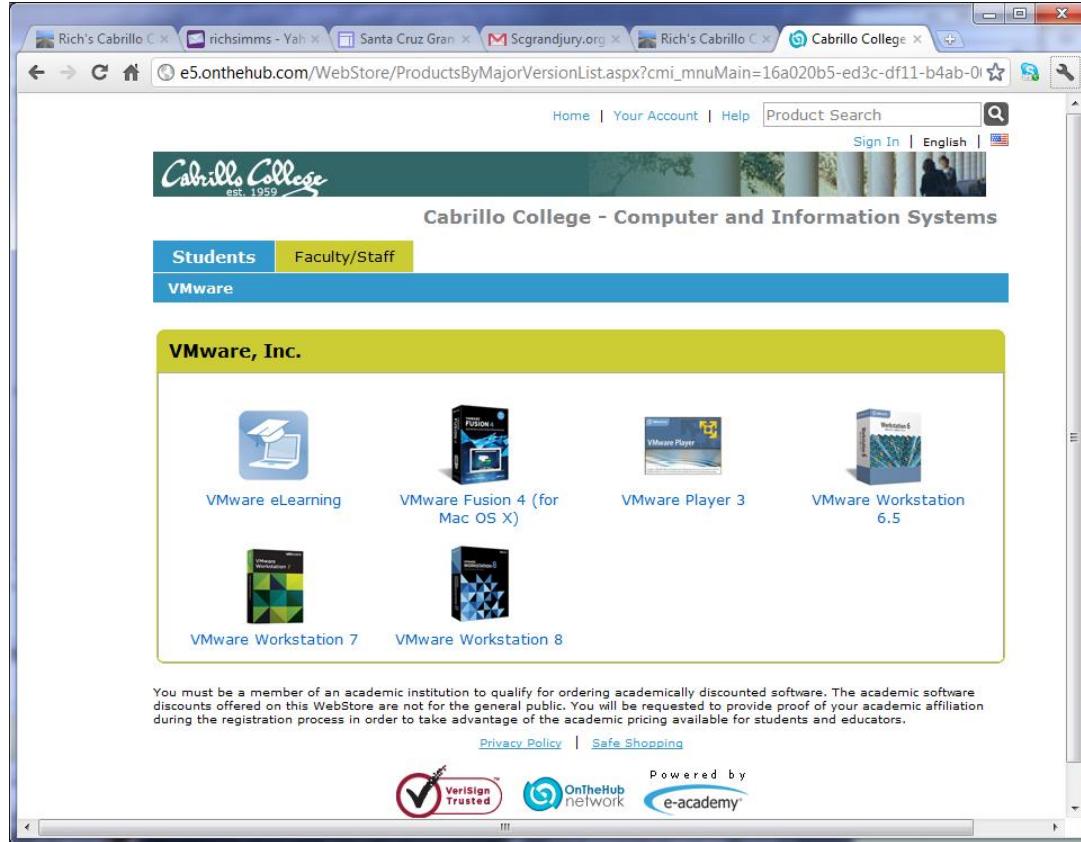
# Microsoft Academic Webstore



- Microsoft software for students registered in a CIS or CS class at Cabrillo
- Available after registration is final (two weeks after first class)

To get to this page, go to **http://simms-teach.com/resources** and click on the appropriate link in the Tools and Software section

# VMware Academic Webstore



The screenshot shows a web browser window displaying the Cabrillo College Computer and Information Systems VMware Academic Webstore. The page header includes the Cabrillo College logo and navigation links for Home, Your Account, Help, Product Search, Sign In, and English. Below the header, there are tabs for Students, Faculty/Staff, and VMware, with the VMware tab selected. A yellow banner titled "VMware, Inc." displays software boxes for VMware eLearning, VMware Fusion 4 (for Mac OS X), VMware Player 3, VMware Workstation 6.5, VMware Workstation 7, and VMware Workstation 8. A note at the bottom states: "You must be a member of an academic institution to qualify for ordering academically discounted software. The academic software discounts offered on this WebStore are not for the general public. You will be requested to provide proof of your academic affiliation during the registration process in order to take advantage of the academic pricing available for students and educators." At the bottom of the page are links for Privacy Policy and Safe Shopping, along with trust seals for VeriSign Trusted and OnTheHub network, and a note that it is Powered by e-academy.

- VMware software for students registered in a CIS or CS class at Cabrillo
- Available after registration is final (two weeks after first class)

To get to this page, go to **<http://simms-teach.com/resources>** and click on the appropriate link in the Tools and Software section

# 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

<https://www.usenix.org/conference/enigma2016/conference-program/presentation/joyce>



# Footprinting and Reconnaissance

## Reconnaissance

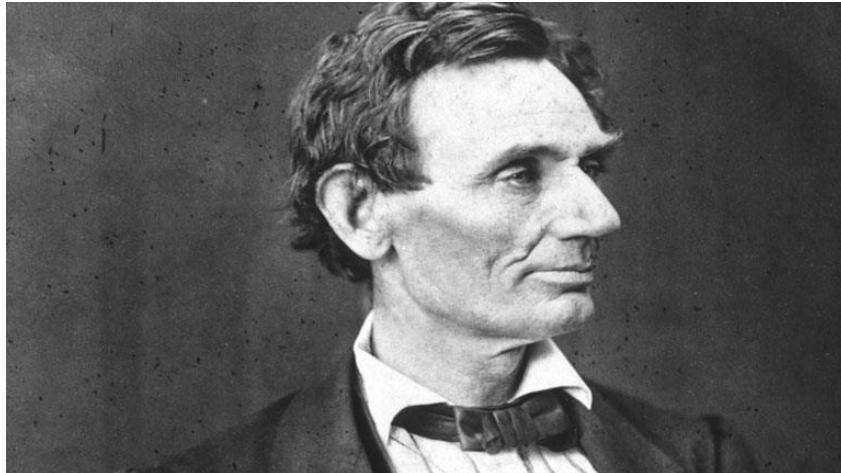
- Also known as "footprinting", "casing the joint", and "information gathering".
- The goal is to learn as much information about the target as possible without being detected.
- Gather information such as:
  - People and organizational structure
  - Related third parties
  - System and network technology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

## Reconnaissance

- 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.
- Search the Internet is a legal way to obtain information.

## Reconnaissance

- 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.*

## Reconnaissance

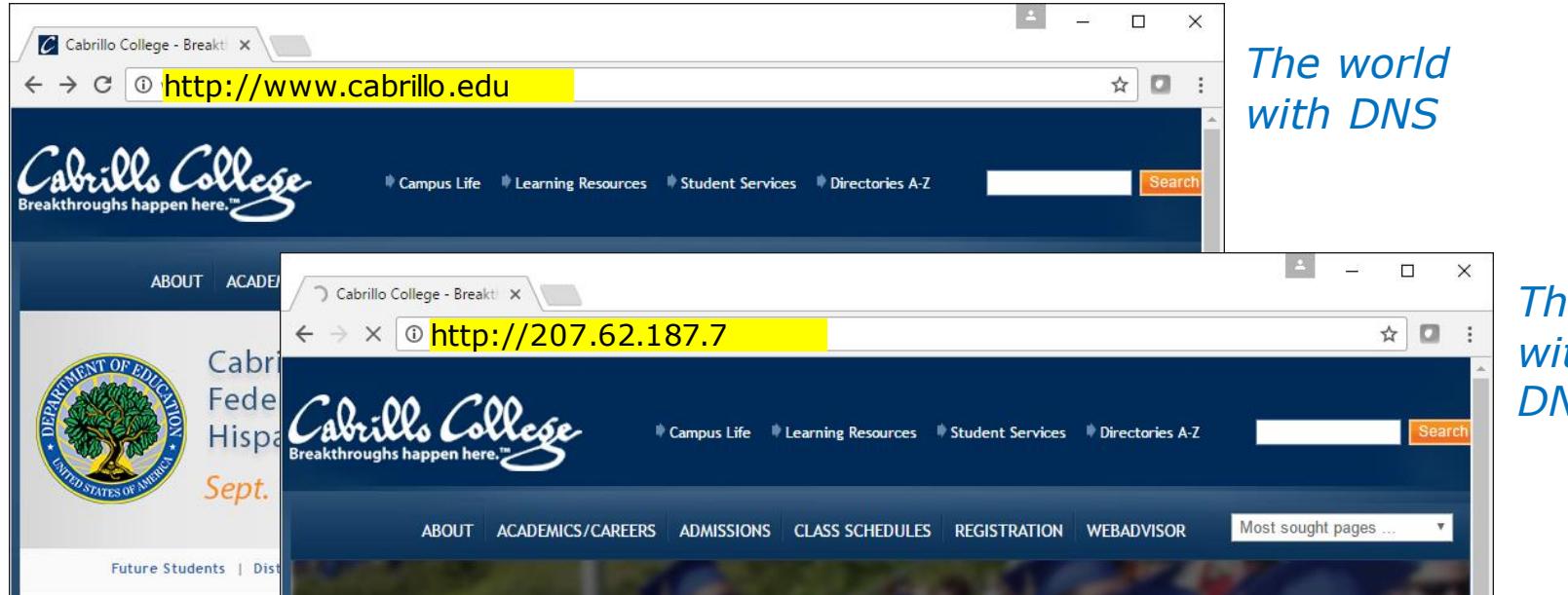
- Active vs. Passive: Have you touched the target?
- Passive: Using methods where you will not be detected by the target.
- Semi-passive: Using methods that appear as normal Internet traffic.
- Active: port scans, vulnerability scans, testing input validation filters, searching for unpublished servers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

<http://www.securitysift.com/passive-reconnaissance/>

# Domain Name System

DNS

## DNS - Domain Name System



The world with DNS

The world without DNS

Note: Either **www.cabrillo.edu** or **207.62.187.7** will work to reach Cabrillo's web server.

But which is easier to remember?



News · Events · Reminders

Need a Job? Tutoring? Advice?  
Sep 14, 2-5pm, Aptos; Sep 15, 11-2pm, Wats. Ctr; en español

Visit the NEW Cabrillo College Welcome Center in SAC East, 2nd Floor!

Cabrillo's 2014-15 Annual Report to the Community

A B C D E F G  
H I J K L M N  
O P Q R S T U

# 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](http://www.isc.org)

# DNS - Forward and Reverse Lookups

## *Forward lookup (Name to IP address)*

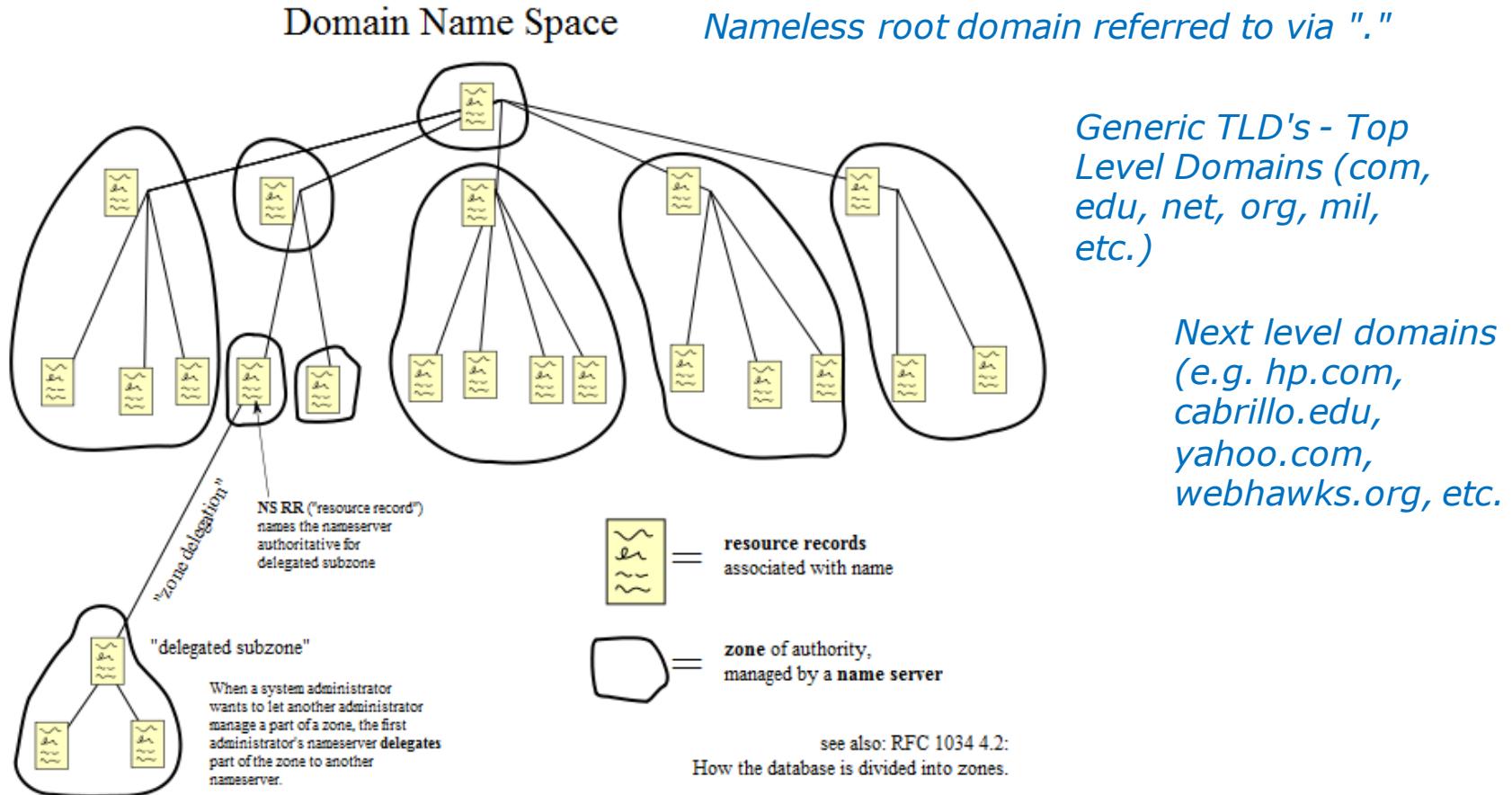
```
root@kali:~# host opus.cis.cabrillo.edu
opus.cis.cabrillo.edu is an alias for oslab.cis.cabrillo.edu.
oslab.cis.cabrillo.edu has address 207.62.187.230
oslab.cis.cabrillo.edu has IPv6 address 2607:f380:80f:f425::230
root@kali:~#
```

## *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.in-
addr.arpa.
230.224-27.187.62.207.in-addr.arpa domain name pointer
oslab.cis.cabrillo.edu.

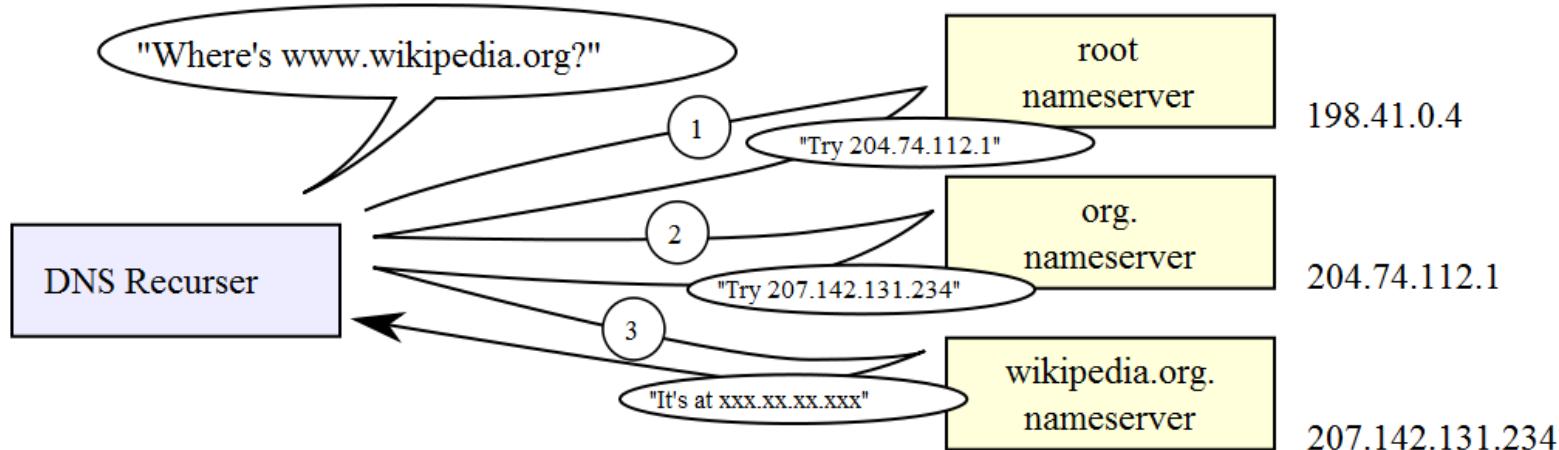
root@kali:~# host 2607:f380:80f:f425::230
0.3.2.0.0.0.0.0.0.0.0.0.0.0.5.2.4.f.f.0.8.0.0.8.3.f.7.0.6.2.ip6.arpa
domain name pointer oslab.cis.cabrillo.edu.
```

## DNS - Hierarchy of authority



source: [http://en.wikipedia.org/wiki/File:Domain\\_name\\_space.svg](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](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.

[http://www.tcpipguide.com/free/t\\_DNSBasicNameResolutionTechniquesIterativeandRecurs-4.htm](http://www.tcpipguide.com/free/t_DNSBasicNameResolutionTechniquesIterativeandRecurs-4.htm)

# DNS Database Resource Record types

SOA - Start of Authority

NS - Nameserver

A - IPv4 Address

AAAA - IPv6 Address

PTR - Pointer (for reverse lookups)

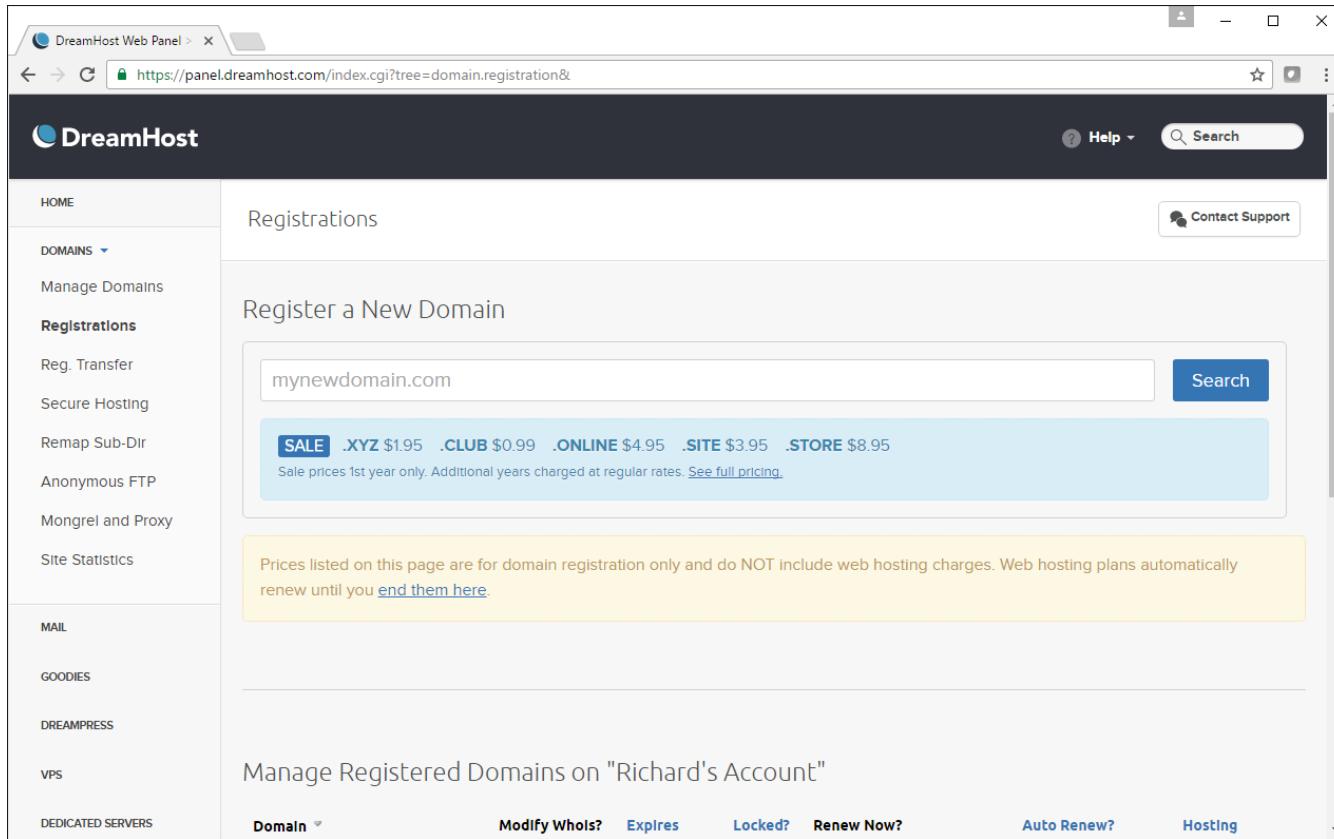
CNAME - Aliases

MX - mail hubs

# Domain Owner

whois

# Anyone can register a domain



The screenshot shows the DreamHost Web Panel interface. The left sidebar has a 'DOMAINS' section with 'Registrations' selected, which is highlighted in blue. The main content area is titled 'Registrations' and 'Register a New Domain'. A search bar contains 'mynewdomain.com' and a 'Search' button. Below the search bar, there's a promotional banner for domain extensions: '.XYZ \$1.95 .CLUB \$0.99 .ONLINE \$4.95 .SITE \$3.95 .STORE \$8.95'. It also notes that sale prices are for the first year only. A yellow callout box states: 'Prices listed on this page are for domain registration only and do NOT include web hosting charges. Web hosting plans automatically renew until you [end them here](#)'. At the bottom, it says 'Manage Registered Domains on "Richard's Account"' and lists columns for 'Domain', 'Modify Whois?', 'Expires', 'Locked?', 'Renew Now?', 'Auto Renew?', and '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: ~
File Edit View Search Terminal Help
root@eh-kali-05:~# whois simms-teach.com

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
```

*Domain information fields*

# Linux whois command

```
root@eh-kali-05: ~
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
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
```

*Registrant contact fields*

# Linux whois command

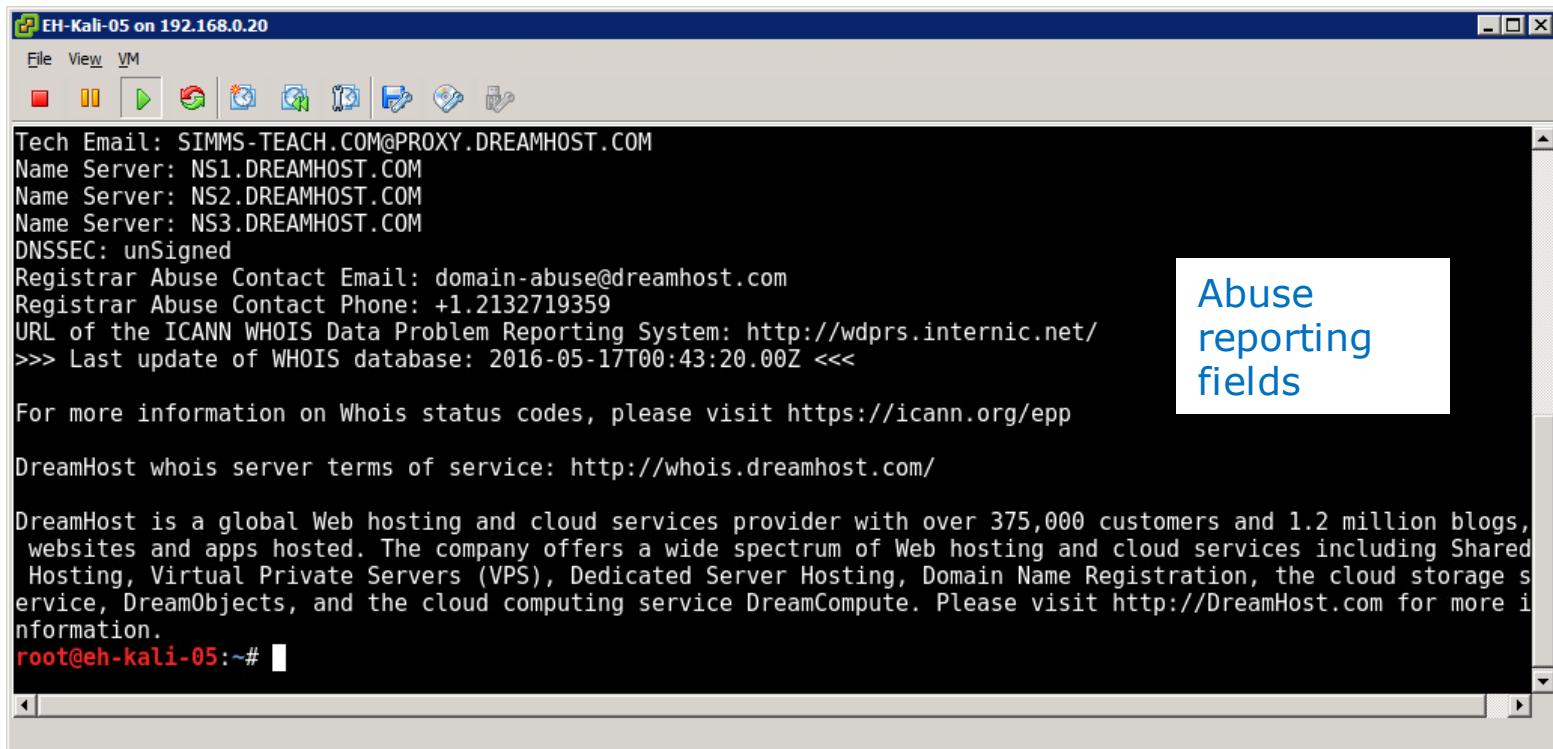
```
root@eh-kali-05: ~
File Edit View Search Terminal Help
Registrant Street: C/O SIMMS-TEACH.COM
Registrant City: BREA
Registrant State/Province: CA
Registrant Postal Code: 92821
Registrant Country: US
Registrant Phone: +1.7147064182
Registrant Phone Ext:
Registrant Fax:
Registrant Fax Ext:
Registrant 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 Ext:
Tech Email: SIMMS-TEACH.COM@PROXY.DREAMHOST.COM
```

**Registrant contact fields**

**Admin contact fields**

**Tech contact fields**

## Linux whois command



```
EH-Kali-05 on 192.168.0.20
File View VM
[Icons]
Tech Email: SIMMS-TEACH.COM@PROXY.DREAMHOST.COM
Name Server: NS1.DREAMHOST.COM
Name Server: NS2.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 <<<
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, DreamObjects, and the cloud computing service DreamCompute. Please visit http://DreamHost.com for more information.
root@eh-kali-05:~#
```

Abuse reporting fields

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

## Activity

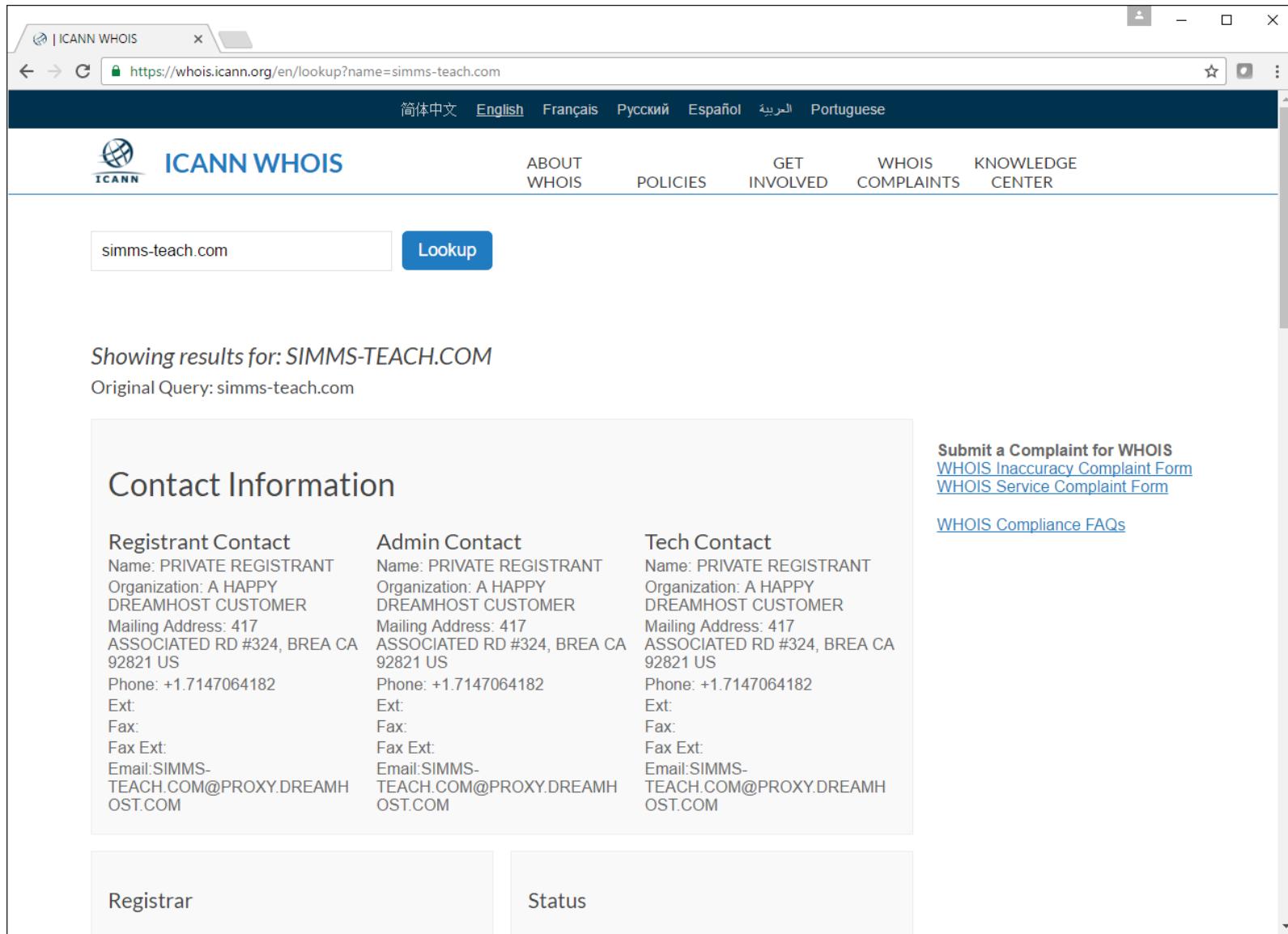
Using only the **whois** command see if you can find two contacts at Beloit College in Wisconsin.

Write their first names into the chat window.

# Domain Owner

[whois.icann.org](http://whois.icann.org)

<http://whois.icann.org>



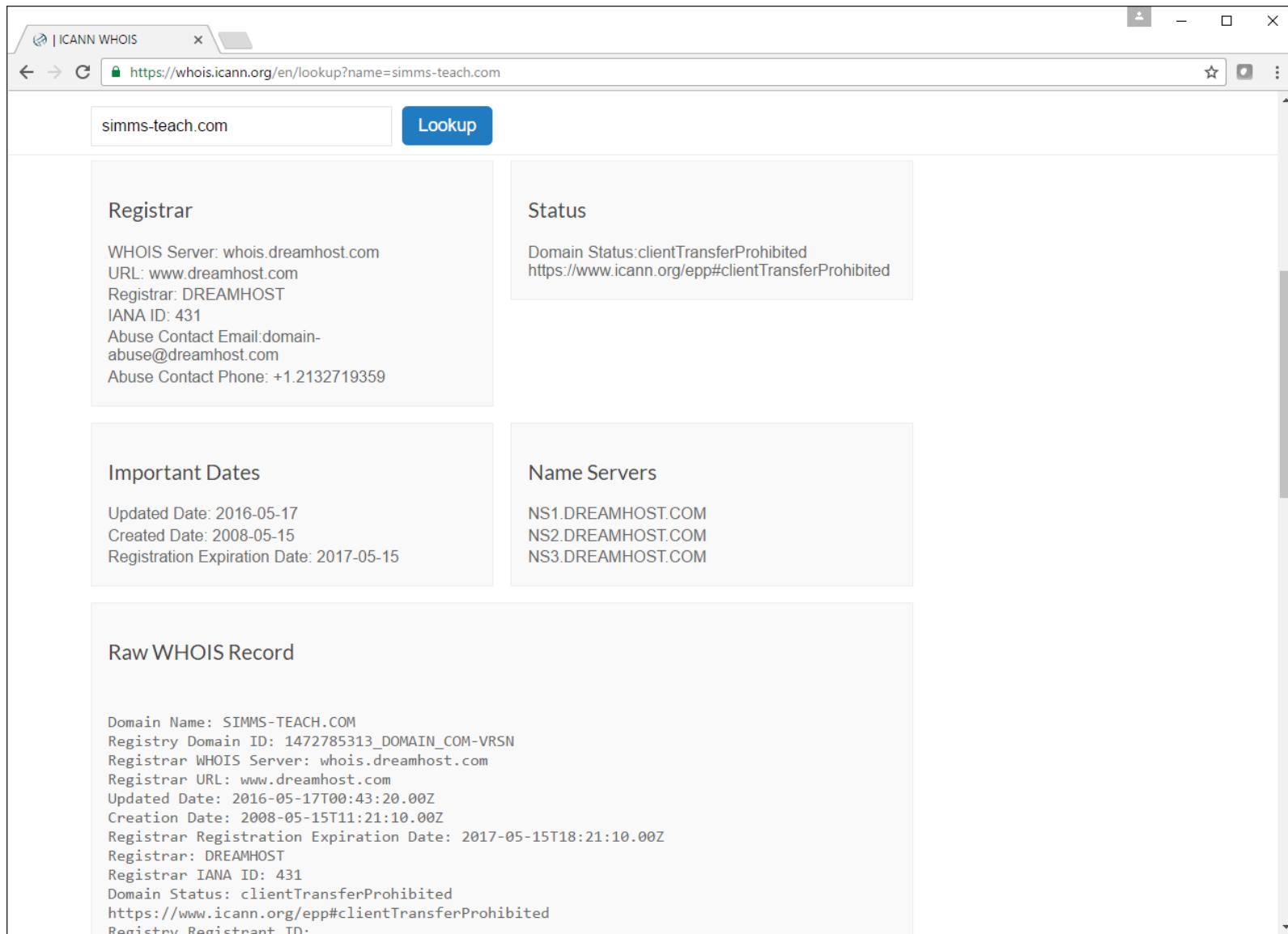
The screenshot shows a web browser window displaying the ICANN WHOIS website at <https://whois.icann.org/en/lookup?name=simms-teach.com>. The page is in English and includes links for other languages: 简体中文, English, Français, Русский, Español, العربية, and Português.

The main content area shows the search results for the domain `simms-teach.com`, with a "Lookup" button. The results are grouped under "Contact Information" and include three sections: "Registrant Contact", "Admin Contact", and "Tech Contact". Each section lists the following details:

Registrant Contact	Admin Contact	Tech Contact
Name: PRIVATE REGISTRANT	Name: PRIVATE REGISTRANT	Name: PRIVATE REGISTRANT
Organization: A HAPPY DREAMHOST CUSTOMER	Organization: A HAPPY DREAMHOST CUSTOMER	Organization: A HAPPY DREAMHOST CUSTOMER
Mailing Address: 417 ASSOCIATED RD #324, BREA CA 92821 US	Mailing Address: 417 ASSOCIATED RD #324, BREA CA 92821 US	Mailing Address: 417 ASSOCIATED RD #324, BREA CA 92821 US
Phone: +1.7147064182	Phone: +1.7147064182	Phone: +1.7147064182
Ext:	Ext:	Ext:
Fax:	Fax:	Fax:
Fax Ext:	Fax Ext:	Fax Ext:
Email:SIMMS-TEACH.COM@PROXY.DREAMHOST.COM	Email:SIMMS-TEACH.COM@PROXY.DREAMHOST.COM	Email:SIMMS-TEACH.COM@PROXY.DREAMHOST.COM

On the right side of the results, there are links for "Submit a Complaint for WHOIS", "WHOIS Inaccuracy Complaint Form", and "WHOIS Service Complaint Form". Below these are links for "WHOIS Compliance FAQs". At the bottom of the page, there are two buttons: "Registrar" and "Status".

<http://whois.icann.org>

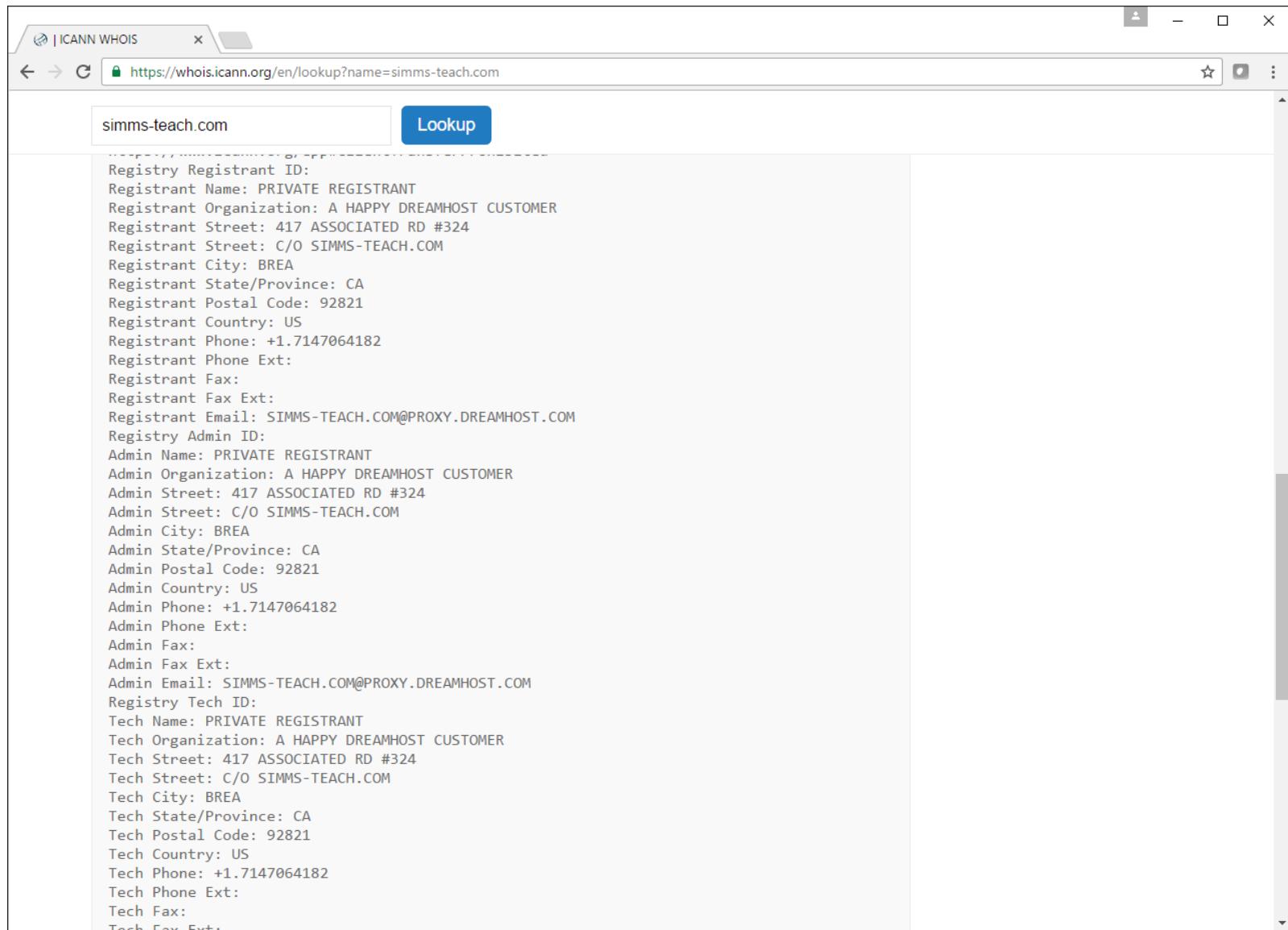


The screenshot shows the ICANN WHOIS lookup results for the domain `simms-teach.com`. The interface is divided into several sections:

- 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-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
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
Registrant ID:
```

<http://whois.icann.org>



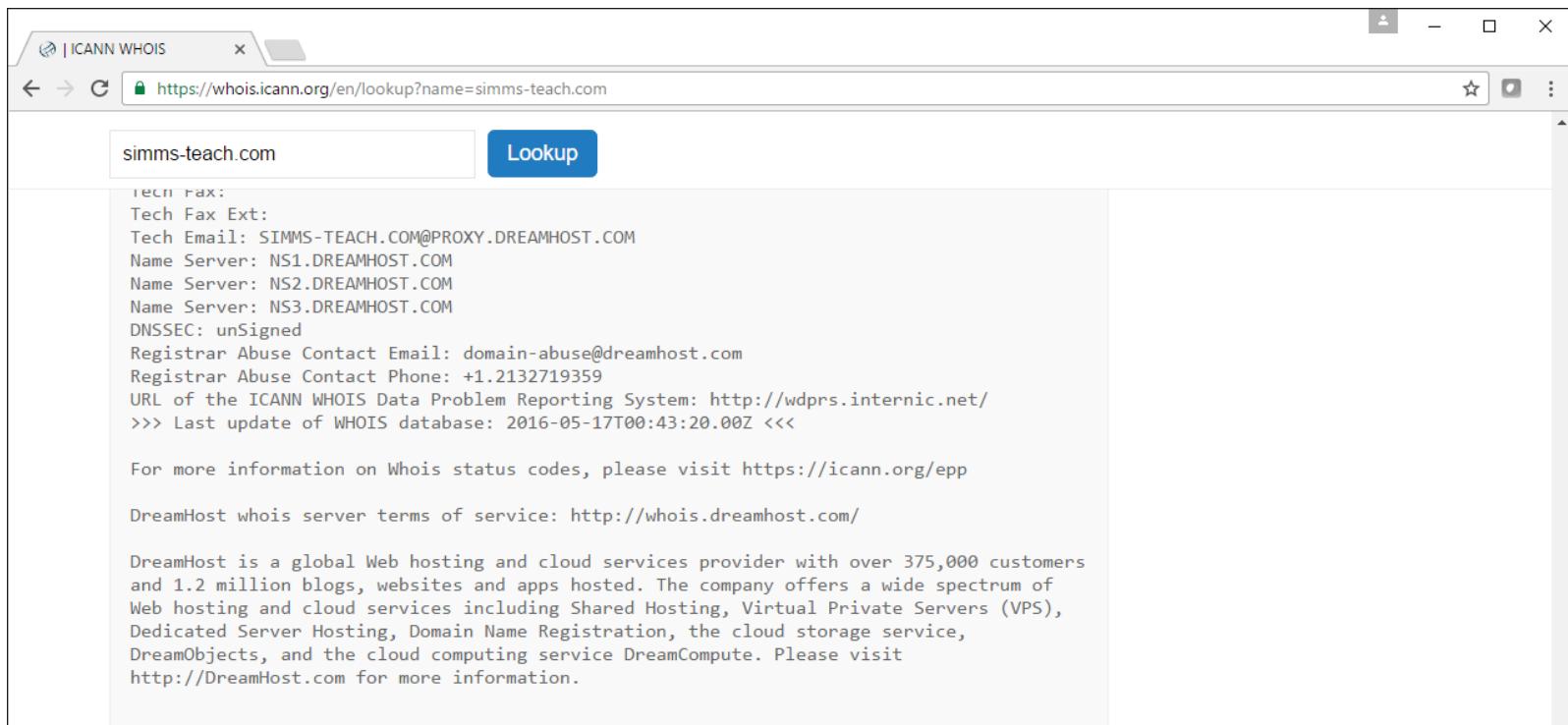
The screenshot shows a web browser window with the title "ICANN WHOIS". The address bar displays the URL <https://whois.icann.org/en/lookup?name=simms-teach.com>. A search bar contains the domain name "simms-teach.com" and a blue "Lookup" button is visible. The main content area displays the WHOIS record for the domain, which is registered to a private registrant at DreamHost.

simms-teach.com

Lookup

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 Ext:

<http://whois.icann.org>



The screenshot shows a web browser window titled "ICANN WHOIS". The address bar contains the URL <https://whois.icann.org/en/lookup?name=simms-teach.com>. A search input field contains "simms-teach.com" and a blue "Lookup" button is to its right. Below the input field, the search results are displayed:

Techn Fax:  
Tech Fax Ext:  
Tech Email: SIMMS-TEACH.COM@PROXY.DREAMHOST.COM  
Name Server: NS1.DREAMHOST.COM  
Name Server: NS2.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 <<<

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, DreamObjects, and the cloud computing service DreamCompute. Please visit <http://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, collect, retain or store the results shown other than for the transitory duration necessary to show these results in response to real-time queries.\* These results are shown for the sole purpose of assisting you in obtaining information about domain name registration records and for no other purpose. You agree to use this data only for lawful purposes and further agree not to use this data (i) to allow, enable, or otherwise support the transmission by email, telephone, or facsimile of mass unsolicited, commercial advertising, or (ii) to enable high volume, automated, electronic processes to collect or compile this data for any purpose, including without limitation mining this data for your own personal or commercial purposes. ICANN reserves the right to restrict or terminate your access to the data if you fail to abide by these terms of use. ICANN reserves the right to modify these terms at any time. By submitting a query, you agree to abide by these terms.

\* There is one exception: ICANN acts as the registry operator for the .int TLD, and in that capacity it does collect, generate, retain and store information regarding registrations in the .int TLD.

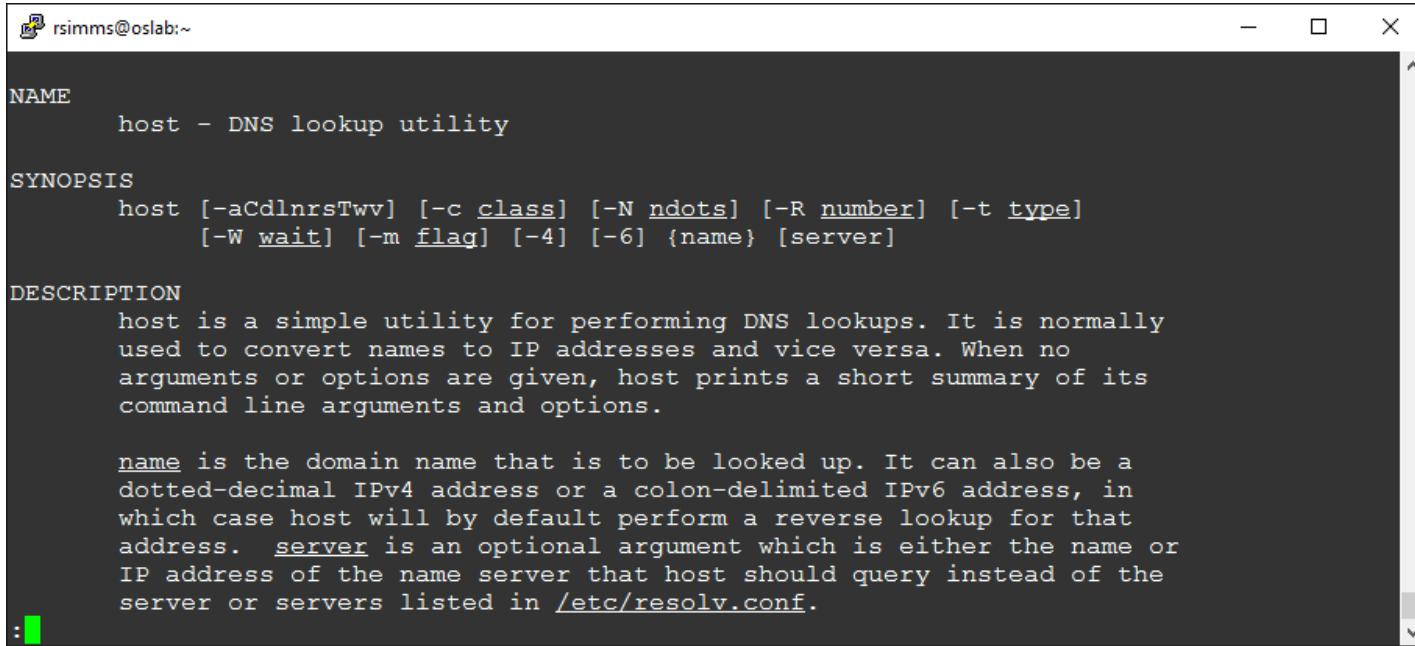
## Activity

Using only <http://whois.icann.org>  
see if you can find a technical contact  
at MIT in Cambridge, MA.

Write their first name into the chat  
window.

# Host Command

# host command



```
rsimms@oslab:~
```

**NAME**  
host - DNS lookup utility

**SYNOPSIS**  
host [-aCdlnrsTwv] [-c class] [-N ndots] [-R number] [-t type]  
[-W wait] [-m flag] [-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.

name 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. server 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 /etc/resolv.conf.

```
:
```

*Easy to use Linux command for resolving names or IP addresses*

# host command

## *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

```
root@kali:~# host opus.cis.cabrillo.edu ns1.cis.cabrillo.edu
```

Using domain server:

Name: ns1.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:~#
```

```
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:

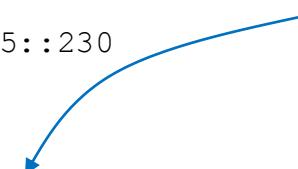
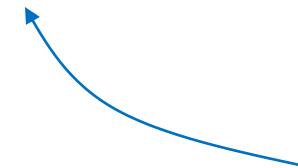
opus.cis.cabrillo.edu is an alias for oslab.cis.cabrillo.edu.

oslab.cis.cabrillo.edu has address 207.62.187.230

oslab.cis.cabrillo.edu has IPv6 address 2607:f380:80f:f425::230

```
root@kali:~#
```

*Specifying a specific name server to do the name resolution*





## Activity

Do a forward and reverse lookup of  
eh-centos.cis.cabrillo.edu

Write the responses you get in the  
chat window.

# Domain Records

dig

# Find domain name servers

```
root@eh-kali-05:~# dig ns cis.cabrillo.edu

; <>> 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.    86400   IN      NS      ns2.cis.cabrillo.edu.
cis.cabrillo.edu.    86400   IN      NS      ns1.cis.cabrillo.edu.

;; ADDITIONAL SECTION:
ns1.cis.cabrillo.edu. 86400   IN      A       172.30.5.101
ns1.cis.cabrillo.edu. 86400   IN      AAAA    2607:f380:80f:f425::252
ns2.cis.cabrillo.edu. 86400   IN      A       172.30.5.102
ns2.cis.cabrillo.edu. 86400   IN      AAAA    2607:f380:80f:f425::253

;; Query time: 2 msec
;; SERVER: 172.30.5.101#53(172.30.5.101)
;; WHEN: Sun Sep 18 15:11:26 PDT 2016
;; MSG SIZE  rcvd: 169

root@eh-kali-05:~#
```

**dig ns cis.cabrillo.edu**

# Find domain mail servers

```
root@eh-kali-05:~# dig mx cis.cabrillo.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

;; OPT PSEUDOSECTION:
;; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;cis.cabrillo.edu.      IN      MX

;; ANSWER SECTION:
cis.cabrillo.edu.    86400   IN      MX      10 oslab.cis.cabrillo.edu.

;; AUTHORITY SECTION:
cis.cabrillo.edu.    86400   IN      NS       ns1.cis.cabrillo.edu.
cis.cabrillo.edu.    86400   IN      NS       ns2.cis.cabrillo.edu.

;; ADDITIONAL SECTION:
oslab.cis.cabrillo.edu. 86400   IN      A        172.30.5.20
oslab.cis.cabrillo.edu. 86400   IN      AAAA     2607:f380:80f:f425::230
ns1.cis.cabrillo.edu.  86400   IN      A        172.30.5.101
ns1.cis.cabrillo.edu.  86400   IN      AAAA     2607:f380:80f:f425::252
ns2.cis.cabrillo.edu.  86400   IN      A        172.30.5.102
ns2.cis.cabrillo.edu.  86400   IN      AAAA     2607:f380:80f:f425::253

;; Query time: 2 msec
;; SERVER: 172.30.5.101#53(172.30.5.101)
;; WHEN: Sun Sep 18 15:29:00 PDT 2016
;; MSG SIZE  rcvd: 235

root@eh-kali-05:~#
```

**dig mx cis.cabrillo.edu**



## Find domain administrative contact

```
; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 27990
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 5

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;cis.cabrillo.edu.          IN      SOA

;; ANSWER SECTION:
cis.cabrillo.edu.    86400   IN      SOA    ns1.cis.cabrillo.edu. cis-netadmin.cabrillo.edu. 2016091200 1800
 900 604800 1800

;; AUTHORITY SECTION:
cis.cabrillo.edu.    86400   IN      NS     ns1.cis.cabrillo.edu.
cis.cabrillo.edu.    86400   IN      NS     ns2.cis.cabrillo.edu.

;; ADDITIONAL SECTION:
ns1.cis.cabrillo.edu. 86400   IN      A      172.30.5.101
ns1.cis.cabrillo.edu. 86400   IN      AAAA   2607:f380:80f:f425::252
ns2.cis.cabrillo.edu. 86400   IN      A      172.30.5.102
ns2.cis.cabrillo.edu. 86400   IN      AAAA   2607:f380:80f:f425::253

;; Query time: 2 msec
;; SERVER: 172.30.5.101#53(172.30.5.101)
;; WHEN: Sun Sep 18 15:25:19 PDT 2016
;; MSG SIZE rcvd: 218

root@eh-kali-05:~#
```

**dig soa cis.cabrillo.edu**



# Find domain hosts via zone transfer

*Most name servers are configured to never publicly release this information*

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

; <>> DiG 9.8.2rc1-RedHat-9.8.2-0.47.rc1.el6 <>> axfr cis.cabrillo.edu
;; global options: +cmd
cis.cabrillo.edu.      86400   IN      SOA      ns1.cis.cabrillo.edu. cis-netadmin.cab
rillo.edu. 2016091200 1800 900 604800 1800
cis.cabrillo.edu.      86400   IN      TXT      "v=spf1 ip4:207.62.187.0/24 ip6:2607:f
380:80f:f425::/32 -all"
cis.cabrillo.edu.      86400   IN      MX       10 oslab.cis.cabrillo.edu.
cis.cabrillo.edu.      86400   IN      NS       ns1.cis.cabrillo.edu.
cis.cabrillo.edu.      86400   IN      NS       ns2.cis.cabrillo.edu.
APC-01.cis.cabrillo.edu. 86400   IN      A        172.30.5.38
apollo.cis.cabrillo.edu. 86400   IN      A        172.20.90.57
Arya-01.cis.cabrillo.edu. 86400   IN      A        172.20.90.101
Arya-02.cis.cabrillo.edu. 86400   IN      A        172.20.90.102
Arya-03.cis.cabrillo.edu. 86400   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#53(127.0.0.1)
;; WHEN: Sun Sep 18 15:25:22 2016
;; XFR size: 480 records (messages 1, bytes 12907)

[root@ns2 ~]#
```



## Activity

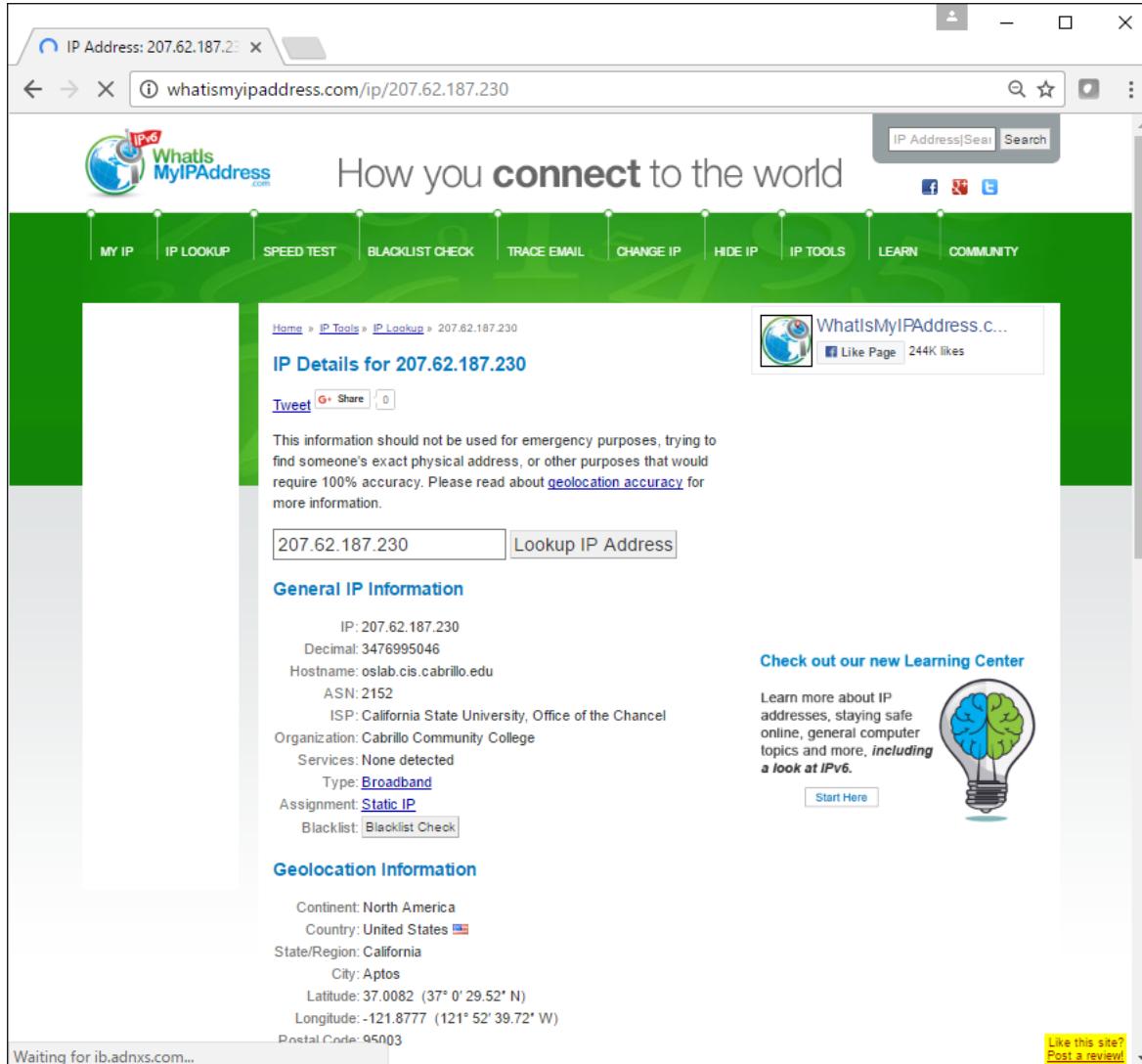
Which domain uses more mx records,  
google.com or amazon.com?

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

# Identifying IP Addresses

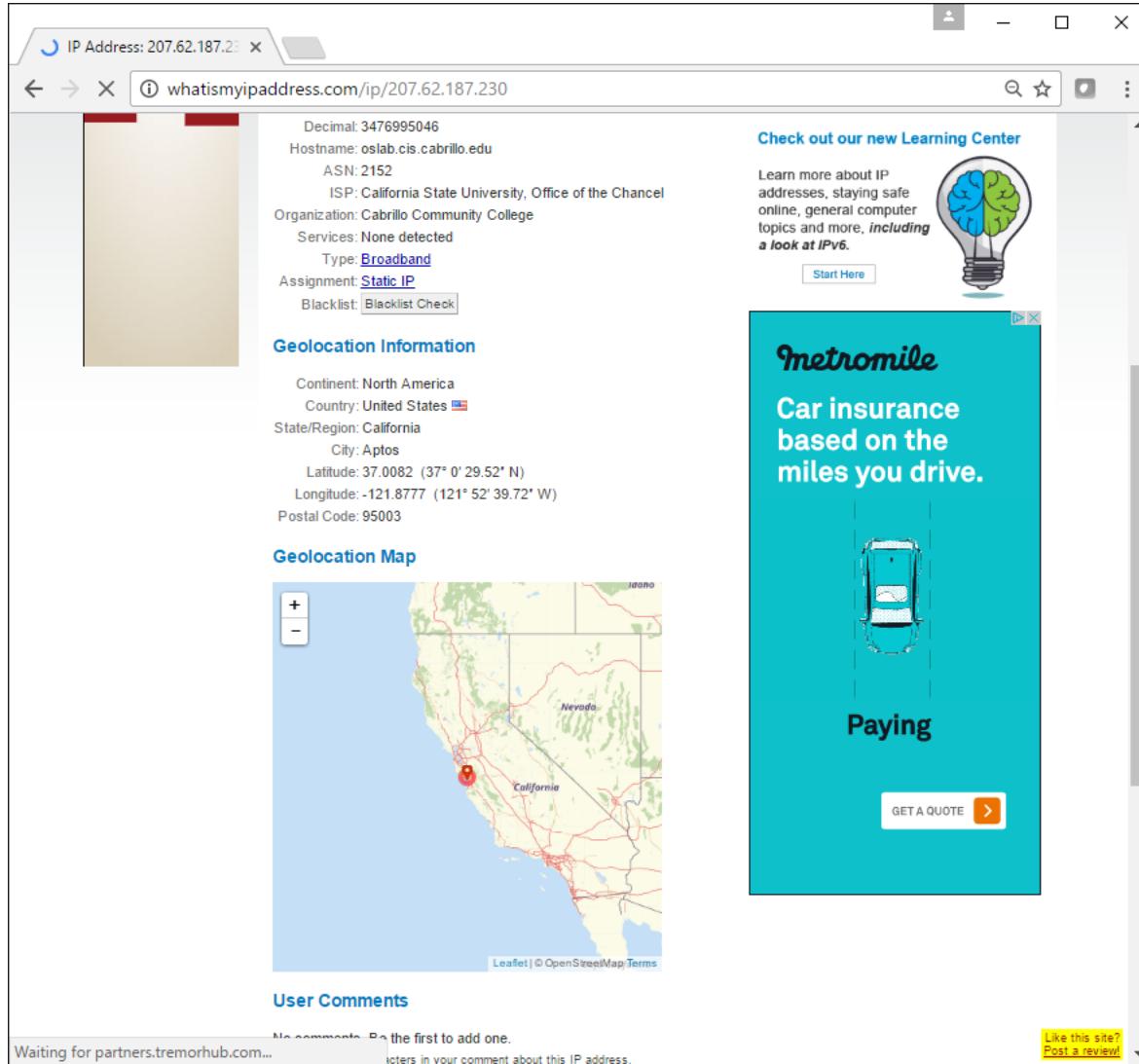
[whatismyipaddress.com/](http://whatismyipaddress.com/)

<http://whatismyipaddress.com/>



The screenshot shows a web browser window displaying the [WhatIsMyIPAddress.com](http://whatismyipaddress.com) website. The address bar shows "IP Address: 207.62.187.230" and the URL "whatismyipaddress.com/ip/207.62.187.230". The page title is "How you **connect** to the world". The main navigation menu includes links for MY IP, IP LOOKUP, SPEED TEST, BLACKLIST CHECK, TRACE EMAIL, CHANGE IP, HIDE IP, IP TOOLS, LEARN, and COMMUNITY. A sidebar on the left shows a green progress bar. The central content area displays "IP Details for 207.62.187.230" with a note about geolocation accuracy. It lists the IP address, decimal value, hostname, ASN, ISP, organization, services, type, assignment, and blacklist status. Below this is a "General IP Information" section with detailed data. To the right, there's a "Geolocation Information" section with continent, country, state/region, city, latitude, longitude, and postal code. A "Check out our new Learning Center" section features a lightbulb icon and a "Start Here" button. A sidebar on the right includes social sharing buttons and a "Like this site? Post a review!" link. The footer at the bottom says "Waiting for ib.adnxs.com...".

<http://whatismyipaddress.com/>



IP Address: 207.62.187.230

whatismyipaddress.com/ip/207.62.187.230

Decimal: 3476995046  
Hostname: oslab.cis.cabrillo.edu  
ASN: 2152  
ISP: California State University, Office of the Chancellor  
Organization: Cabrillo Community College  
Services: None detected  
Type: [Broadband](#)  
Assignment: [Static IP](#)  
Blacklist: [Blacklist Check](#)

**Geolocation Information**

Continent: North America  
Country: United States   
State/Region: California  
City: Aptos  
Latitude: 37.0082 (37° 0' 29.52" N)  
Longitude: -121.8777 (121° 52' 39.72" W)  
Postal Code: 95003

**Geolocation Map**

A map of California showing the location of Aptos with a red marker. The map includes state and county boundaries, roads, and place names like San Francisco, Los Angeles, and Sacramento.

**User Comments**

No comments. Be the first to add one.

Waiting for partners.tremorhub.com... [Post a comment](#)

Comments in your comment about this IP address.

Check out our new Learning Center

Learn more about IP addresses, staying safe online, general computer topics and more, *including a look at IPv6*.

[Start Here](#)

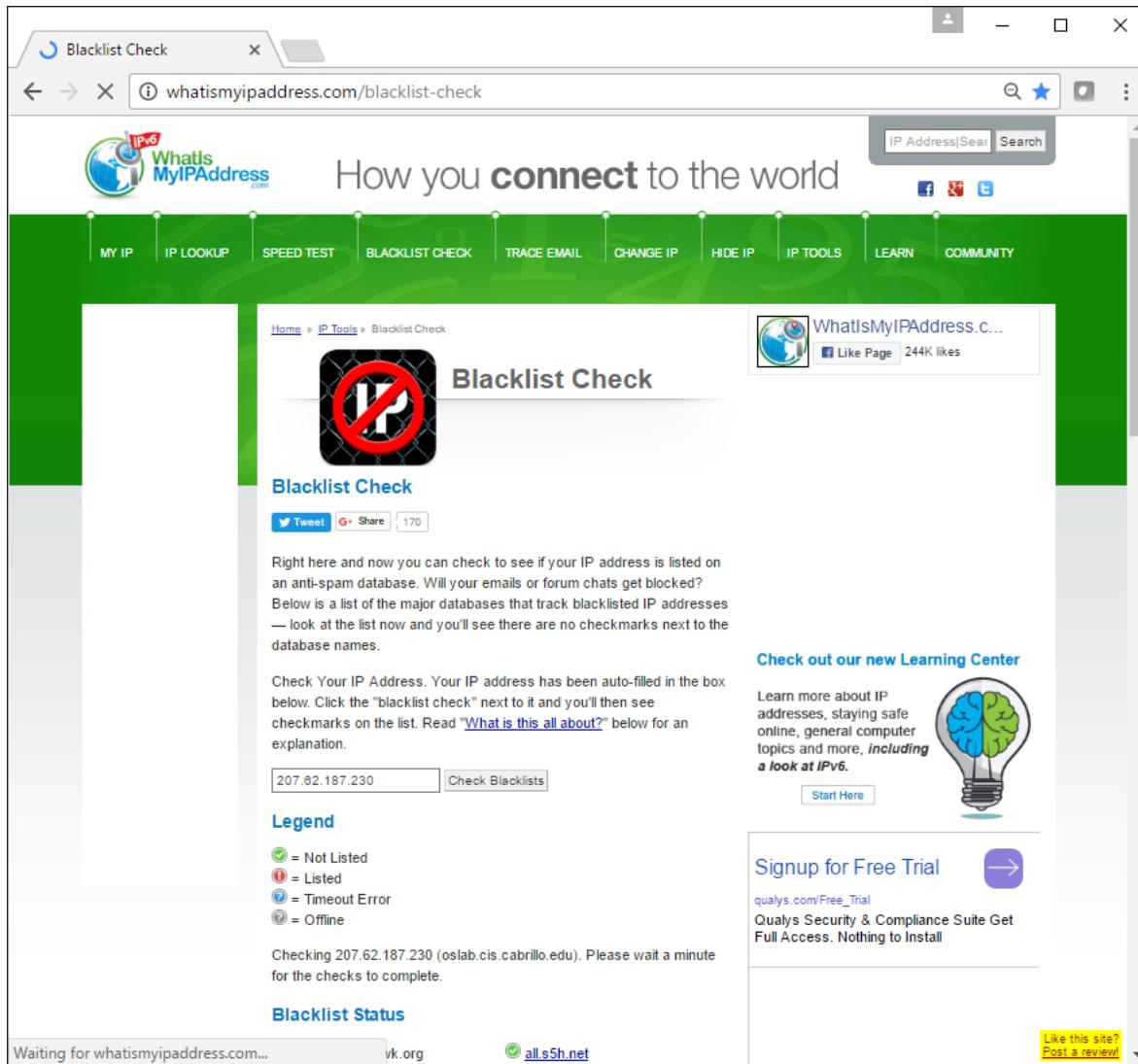
**metromile**  
Car insurance based on the miles you drive.

Paying

[GET A QUOTE](#)

Like this site? Post a review!

<http://whatismyipaddress.com/>



Blacklist Check

whatismyipaddress.com/blacklist-check

How you **connect** to the world

IPv6 WhatIsMyIPAddress.com

MY IP IP LOOKUP SPEED TEST BLACKLIST CHECK TRACE EMAIL CHANGE IP HIDE IP IP TOOLS LEARN COMMUNITY

Home > IP Tools > Blacklist Check

**Blacklist Check**

Right here and now you can check to see if your IP address is listed on an anti-spam database. Will your emails or forum chats get blocked? Below is a list of the major databases that track blacklisted IP addresses — look at the list now and you'll see there are no checkmarks next to the database names.

Check Your IP Address. Your IP address has been auto-filled in the box below. Click the "blacklist check" next to it and you'll then see checkmarks on the list. Read "[What is this all about?](#)" below for an explanation.

207.62.187.230 Check Blacklists

**Legend**

- Green circle = Not Listed
- Red circle = Listed
- Blue circle = Timeout Error
- Grey circle = Offline

Checking 207.62.187.230 (oslab.cis.cabrillo.edu). Please wait a minute for the checks to complete.

**Blacklist Status**

Waiting for whatismyipaddress.com... vk.org allsh.net

Like this site? Post a review!

WhatIsMyIPAddress.com Like Page 244K likes

Check out our new Learning Center

Learn more about IP addresses, staying safe online, general computer topics and more, *including a look at IPv6.*

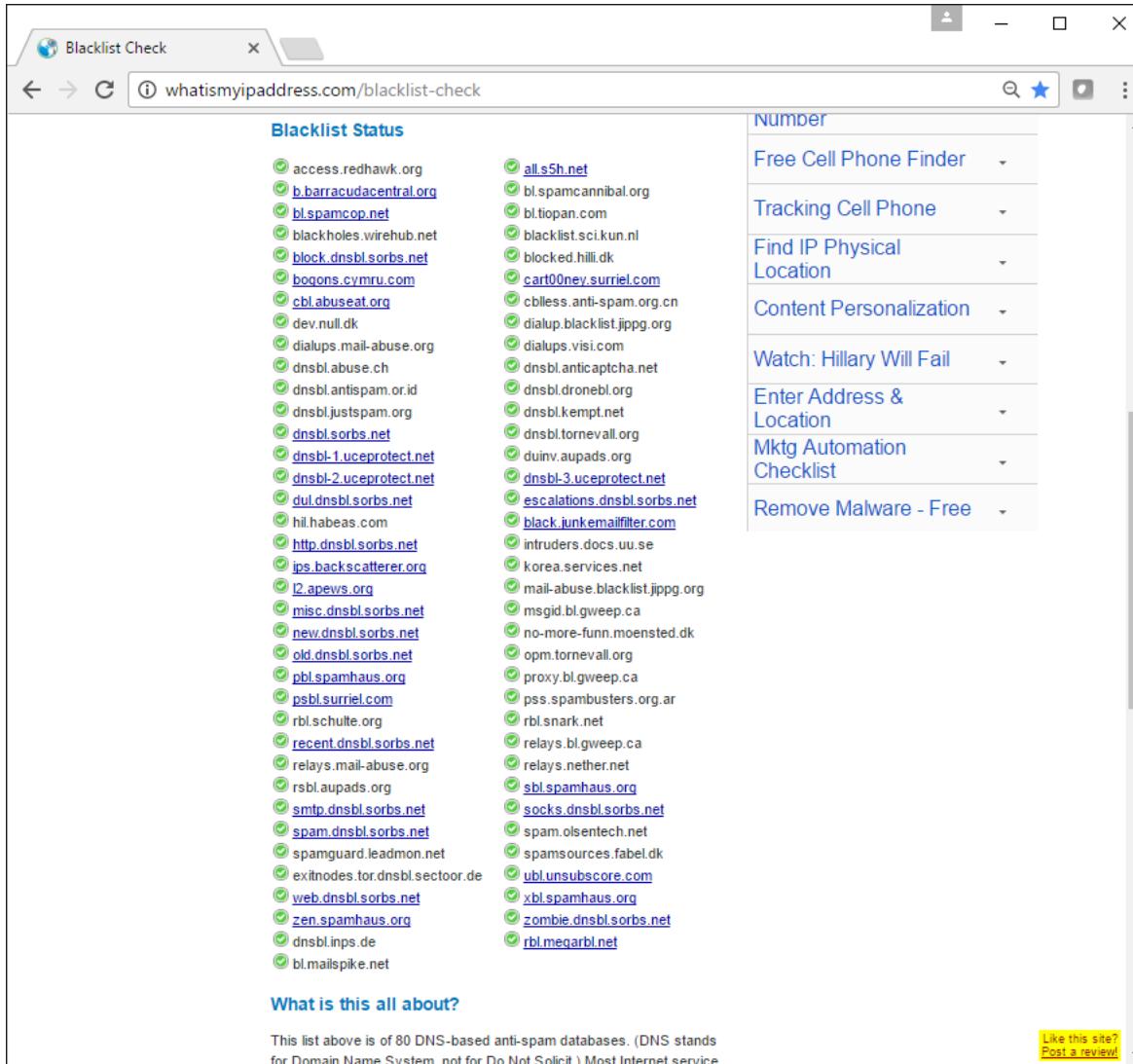
Start Here

Signup for Free Trial →

qualys.com/Free\_Trial

Qualys Security & Compliance Suite Get Full Access. Nothing to Install

<http://whatismyipaddress.com/>



The screenshot shows a web browser window titled "Blacklist Check". The address bar contains the URL "whatismyipaddress.com/blacklist-check". The main content area displays a table titled "Blacklist Status" with two columns: "Domain" and "Number". The "Domain" column lists 80 different DNS-based anti-spam databases, each preceded by a green checkmark. The "Number" column lists corresponding numerical values for each domain. To the right of the table, there is a sidebar with several dropdown menus and links:

- Free Cell Phone Finder
- Tracking Cell Phone
- Find IP Physical Location
- Content Personalization
- Watch: Hillary Will Fail
- Enter Address & Location
- Mktg Automation Checklist
- Remove Malware - Free

**What is this all about?**

This list above is of 80 DNS-based anti-spam databases. (DNS stands for Domain Name System, not for Do Not Solicit.) Most Internet service

Like this site?  
Post a review!

# Activity

## Top attackers

NoSweat : Saturday, September 17, 2016

Source address	Source Host Name	Source User	Count
61.180.150.240	61.180.150.240		138
185.56.82.34	185.56.82.34		34
218.28.172.7	218.28.172.7		25
125.36.37.246	125.36.37.246		25
115.178.75.107	115.178.75.107		11
185.56.82.42	185.56.82.42		6
222.186.58.121	222.186.58.121		4
94.247.28.200	94.247.28.200		4
122.117.148.113	122-117-148-113.HINET-IP.hinet.net		2

Pick one of the IP addresses above and 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.

# Maltego

## Maltego

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

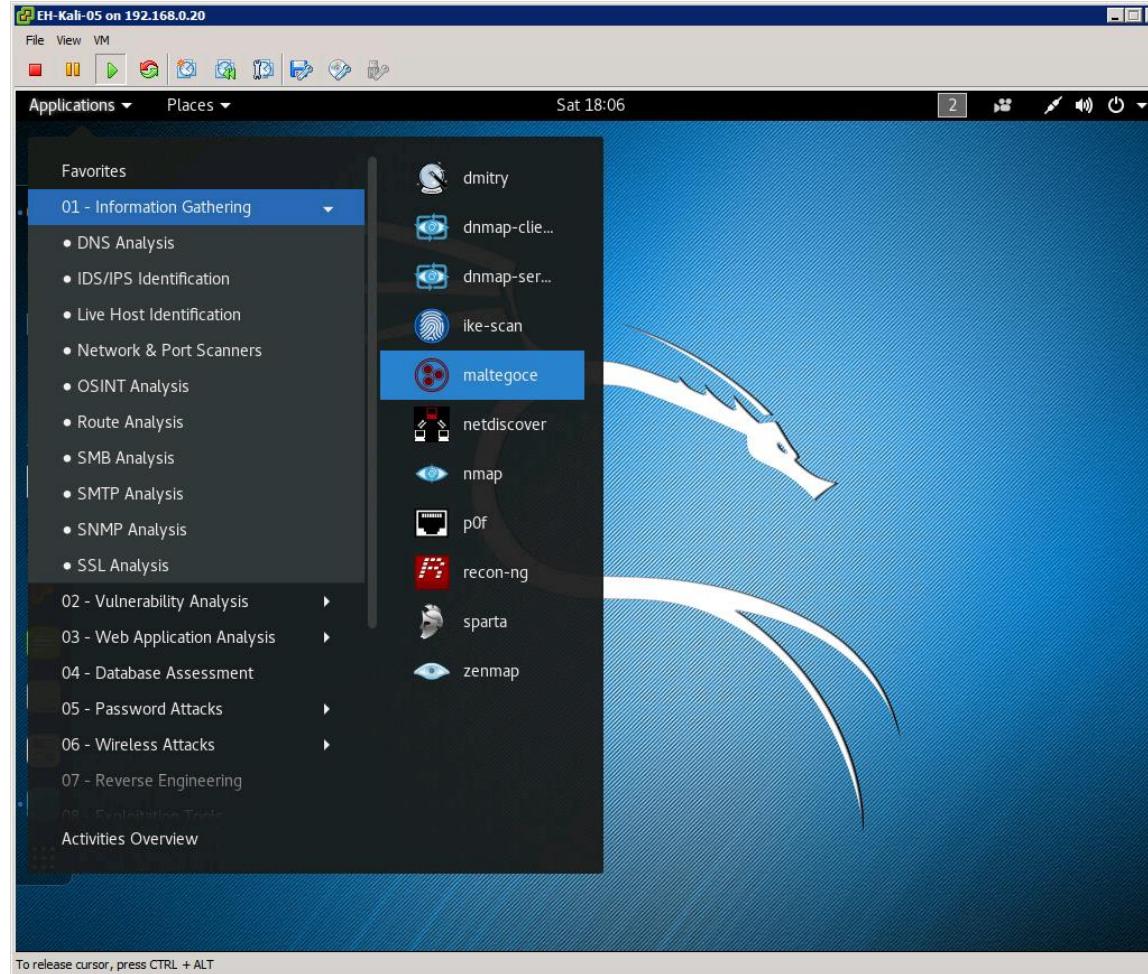
Limitations :

- 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 and server is not encrypted

# Maltego

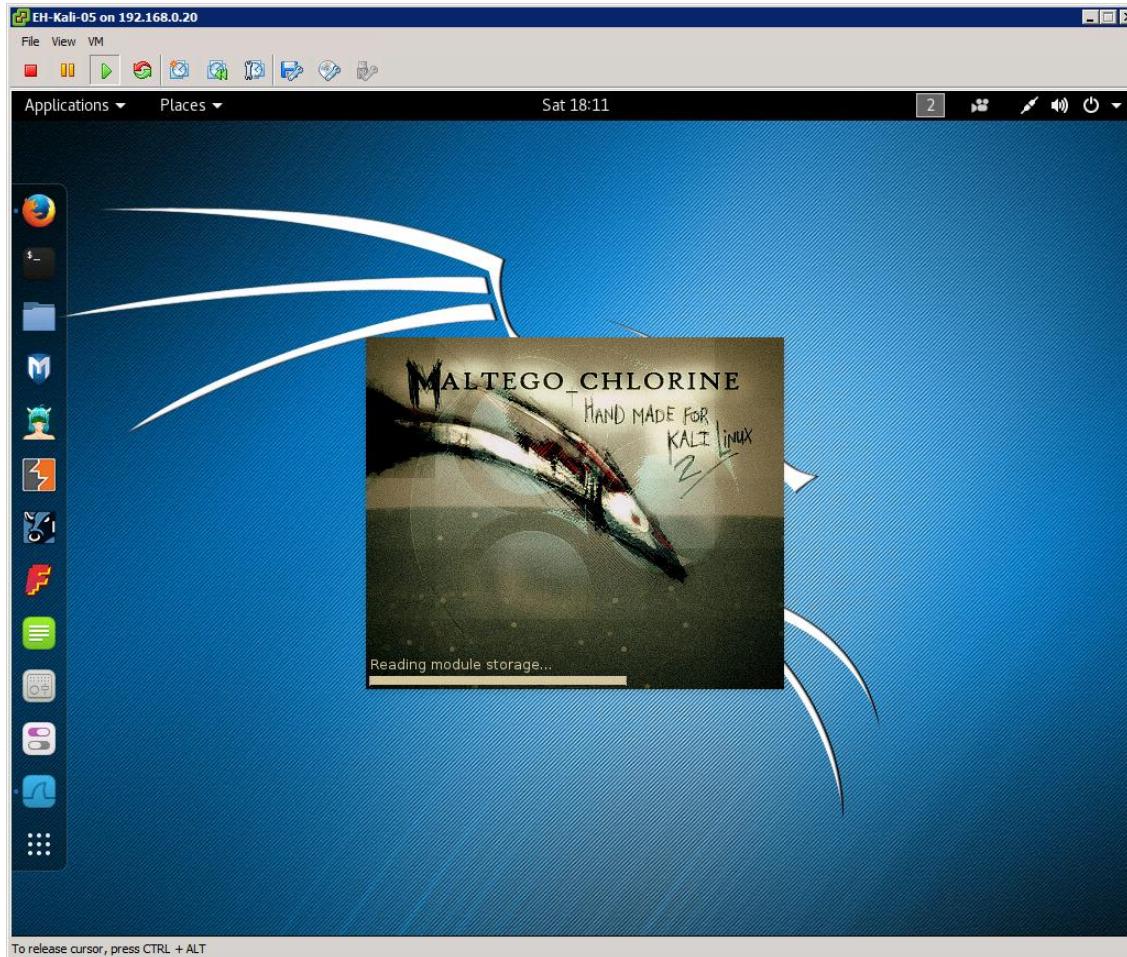
The screenshot shows a web browser window displaying the Paterva website at <https://www.paterva.com/web7/>. The page features a dark background with a chalkboard-like texture. At the top left is the Paterva logo and tagline "A new train of thought". A navigation bar includes links for ABOUT, PRODUCTS, SERVICES, QUOTES, DOWNLOADS, DOCS, and CONTACT. A prominent red "Buy" button is centered above three circular icons representing different Maltego components: a green icon for "Maltego GUI", a blue icon for "About Paterva", and a yellow icon for "Maltego Servers". Each icon has a corresponding text label below it and a "Read more" button.

# Maltego

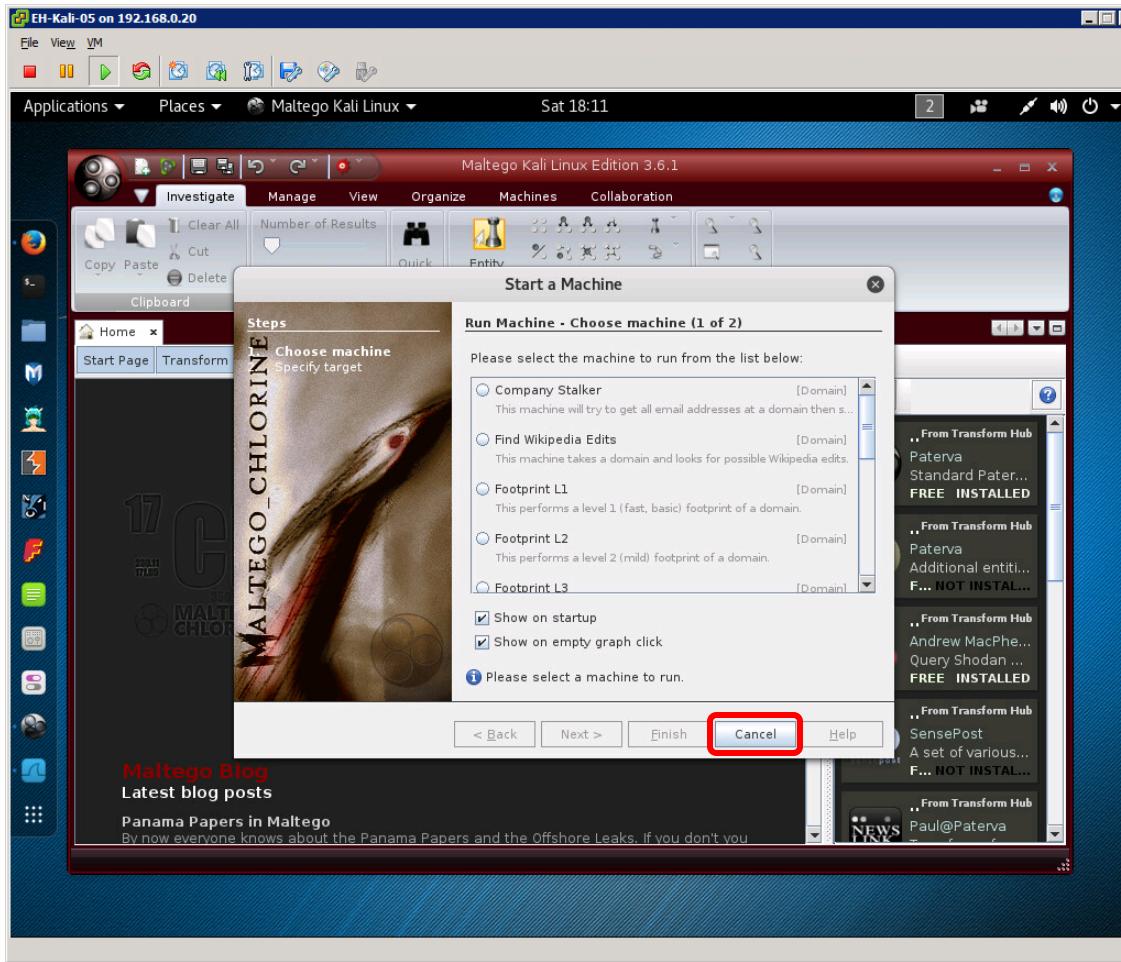


*Applications > 01-Information Gathering > maltegoce*

# Maltego

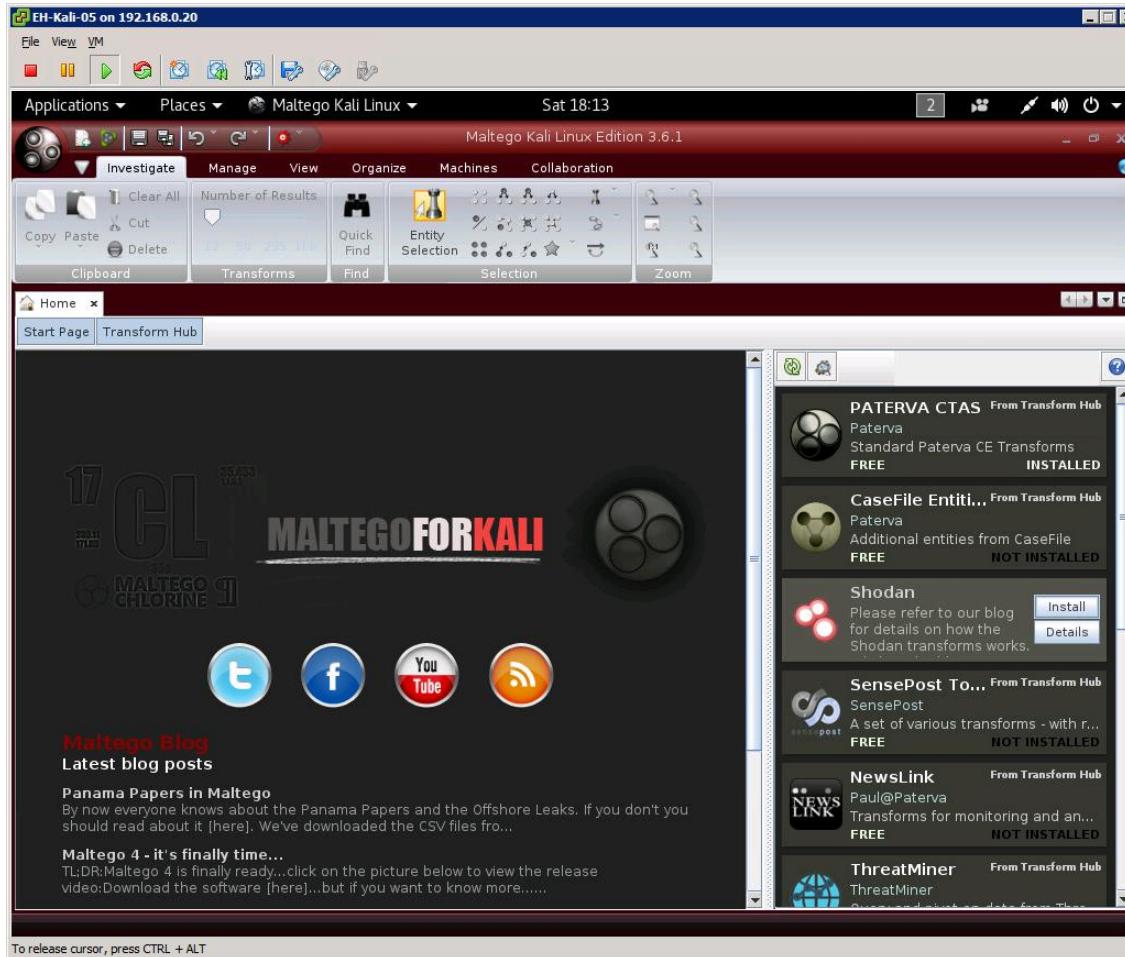


## Maltego



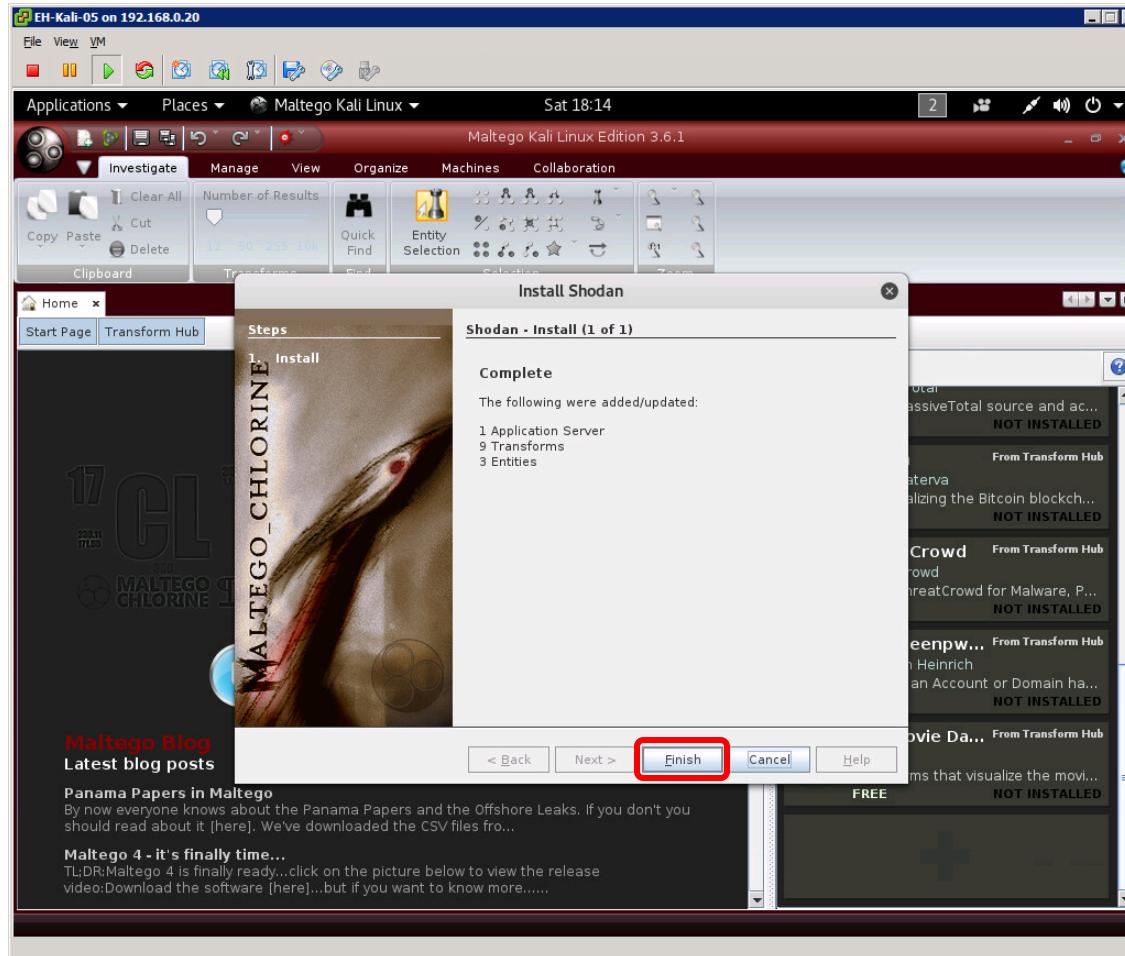
Click Cancel.

# Maltego



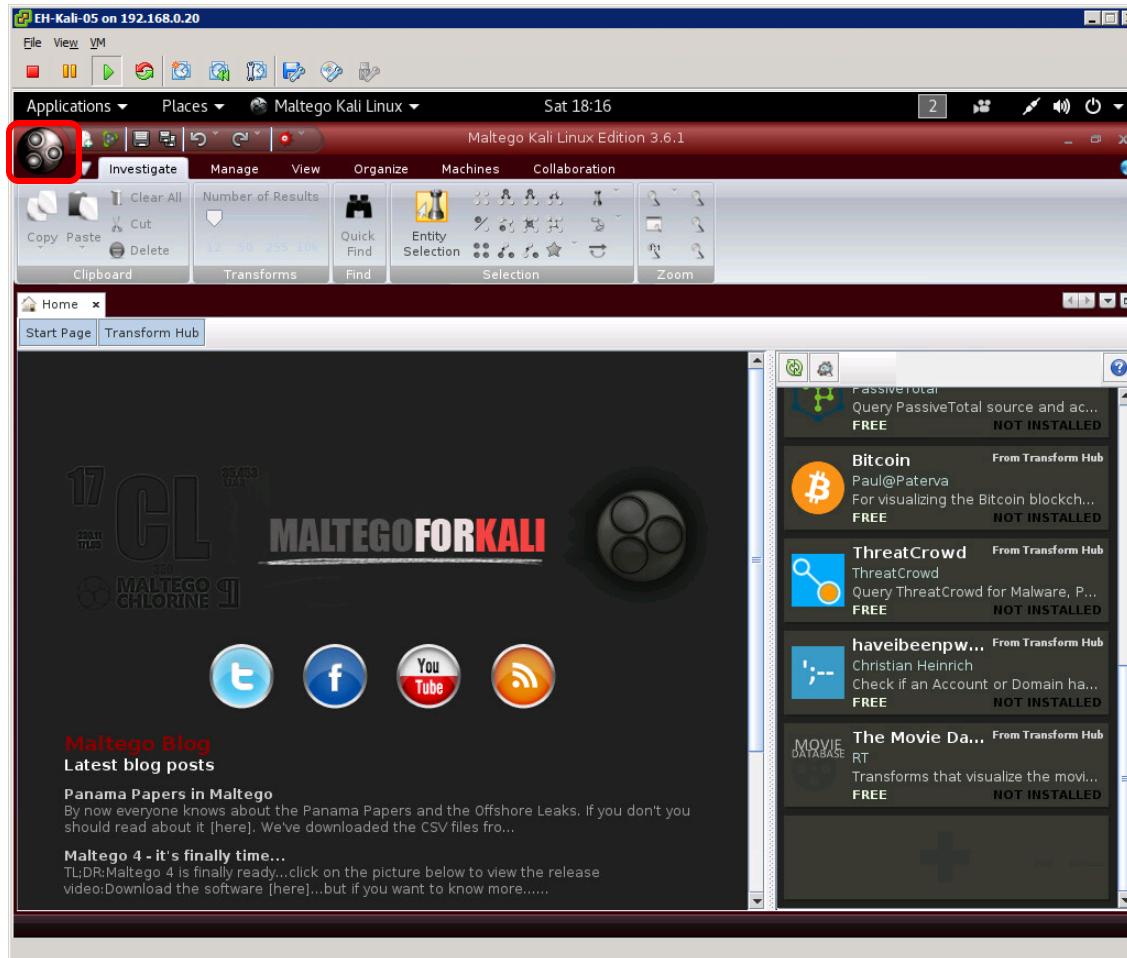
*Install Shodan transform*

# Maltego



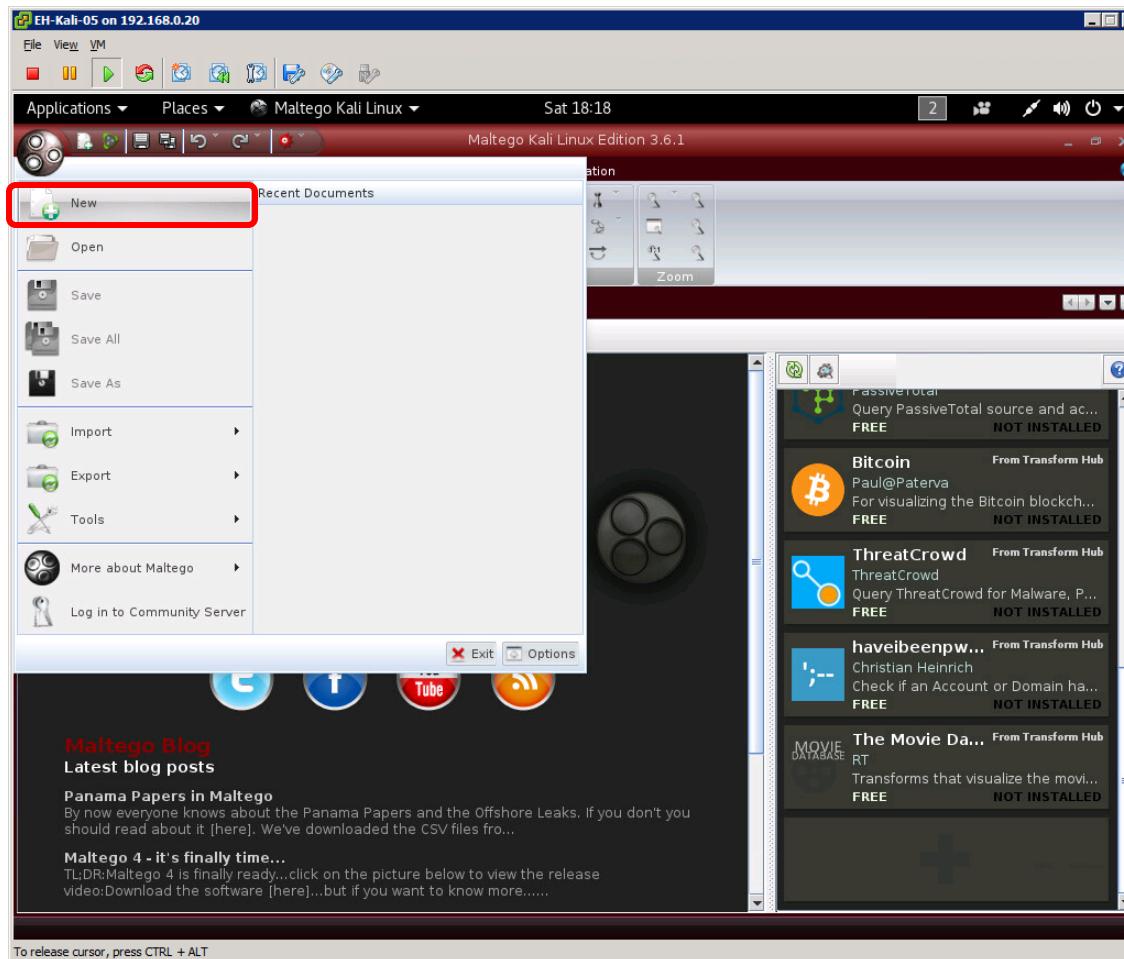
*Click Finish.*

## Maltego



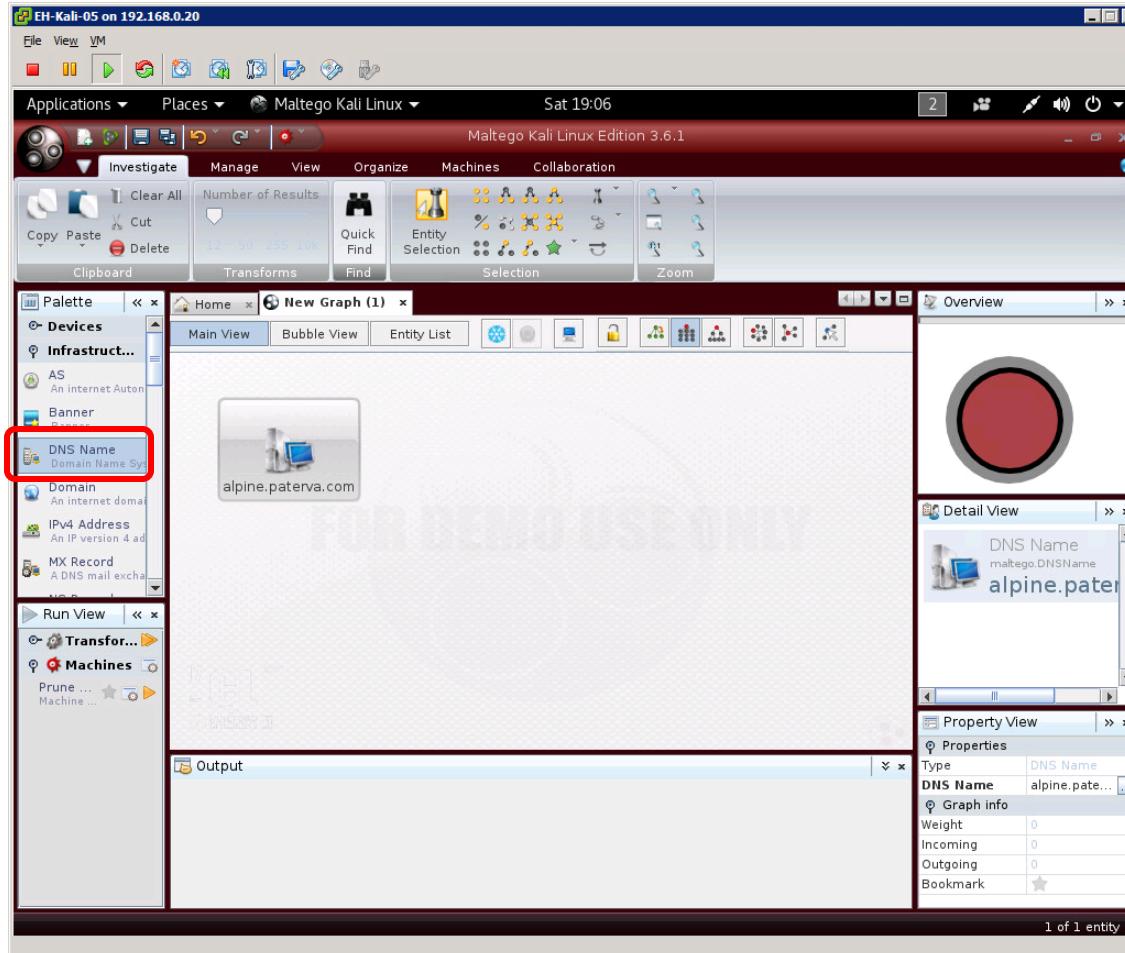
*Click main Maltego icon.*

# Maltego



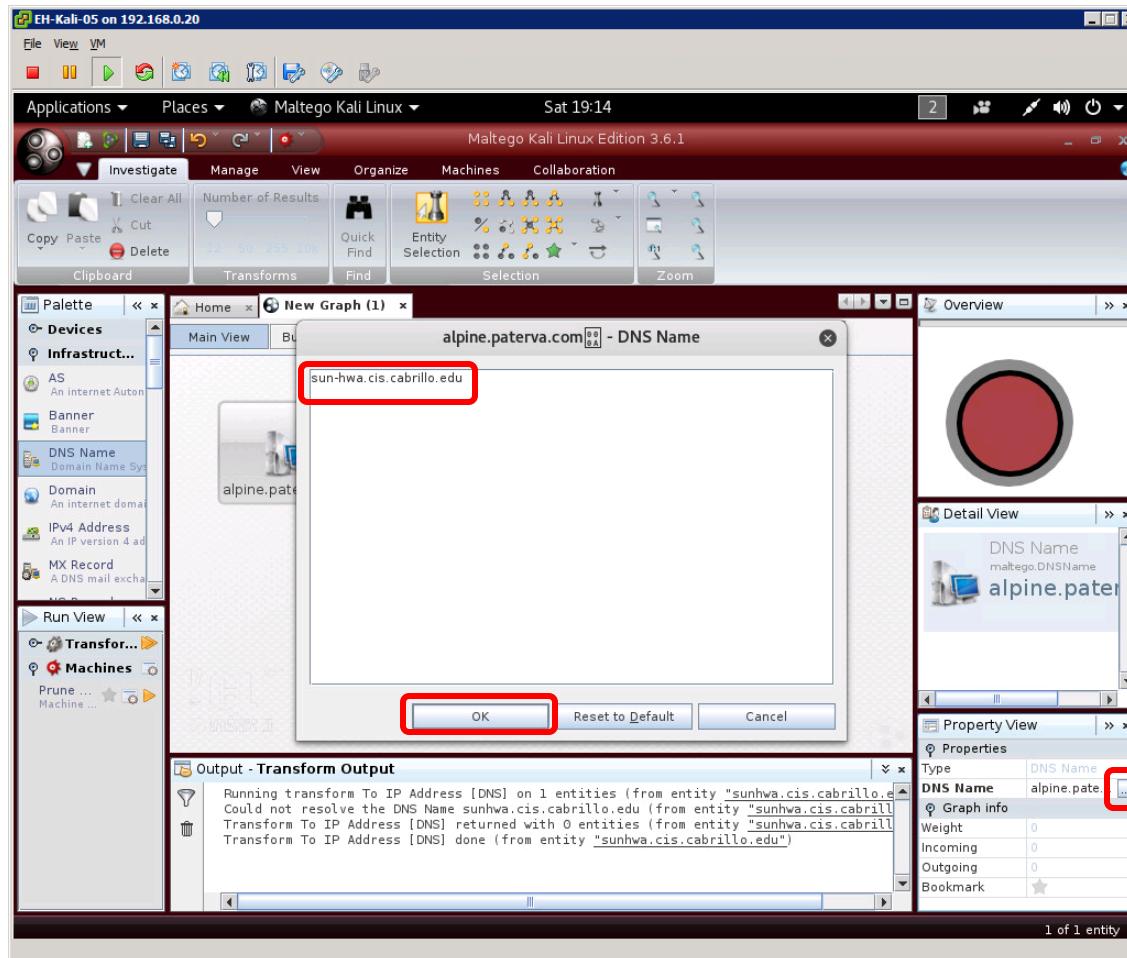
Select New.

# Maltego



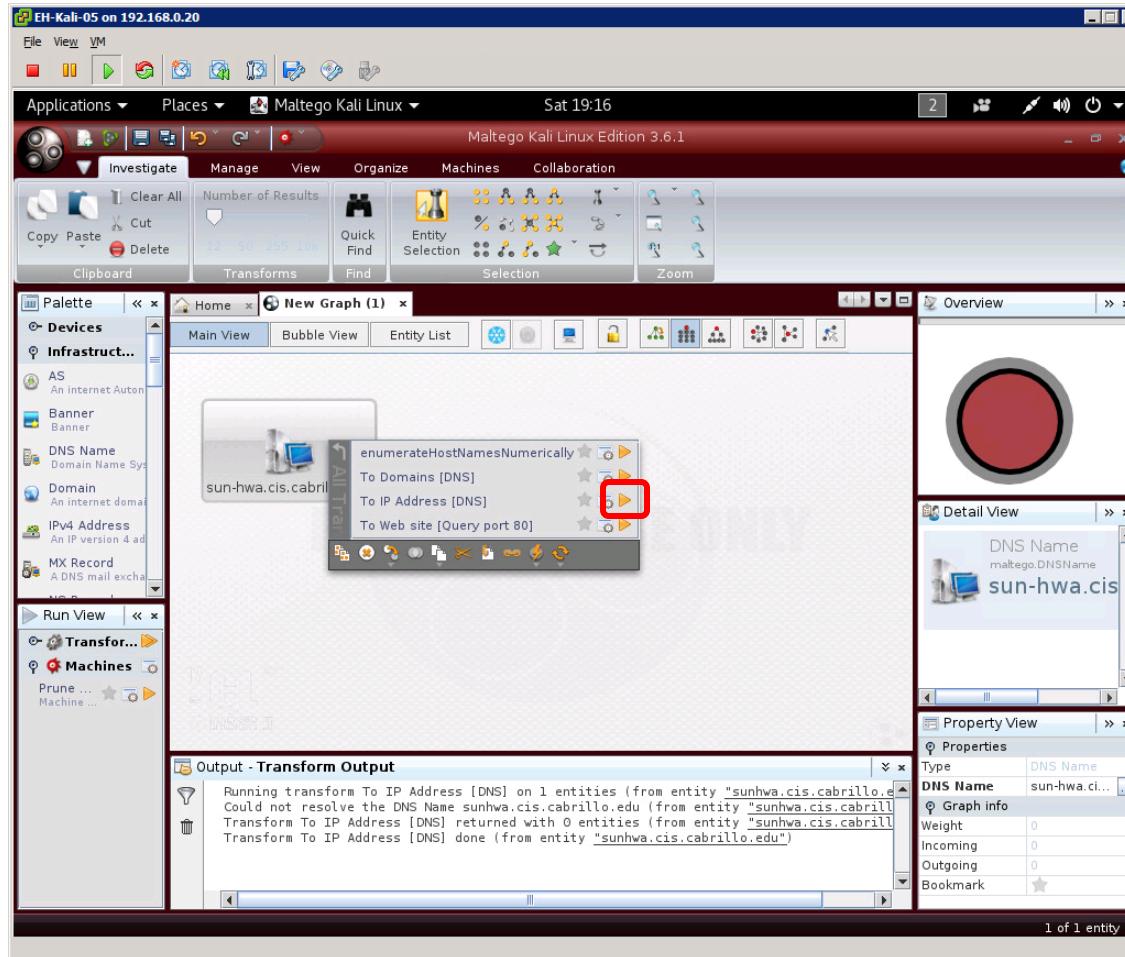
*Click on DNS Name in the Infrastructure Palette and drag to the New Graph.*

# Maltego



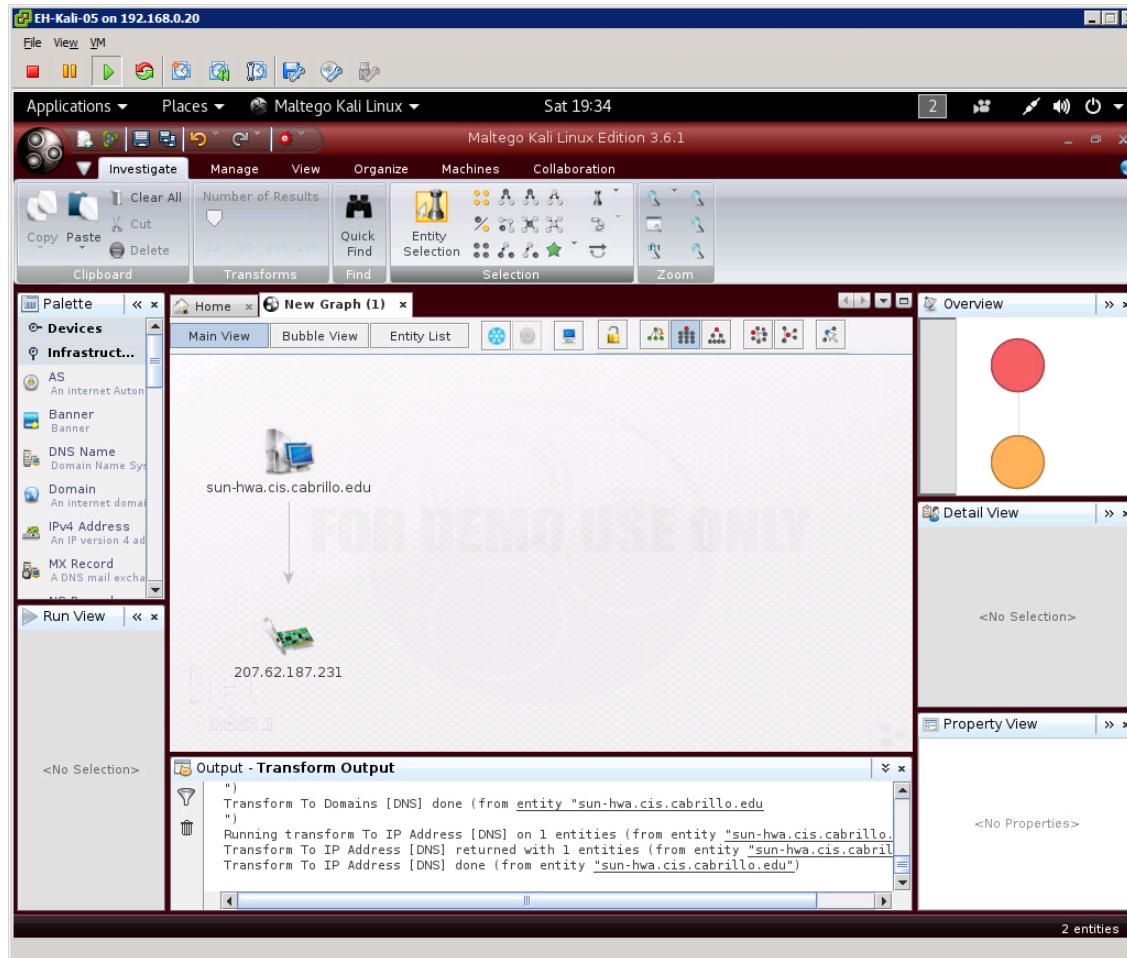
*Click the "..." icon in the Property View to change the DNS Name to sun-hwa.cis.cabrillo.edu then click OK.*

# Maltego



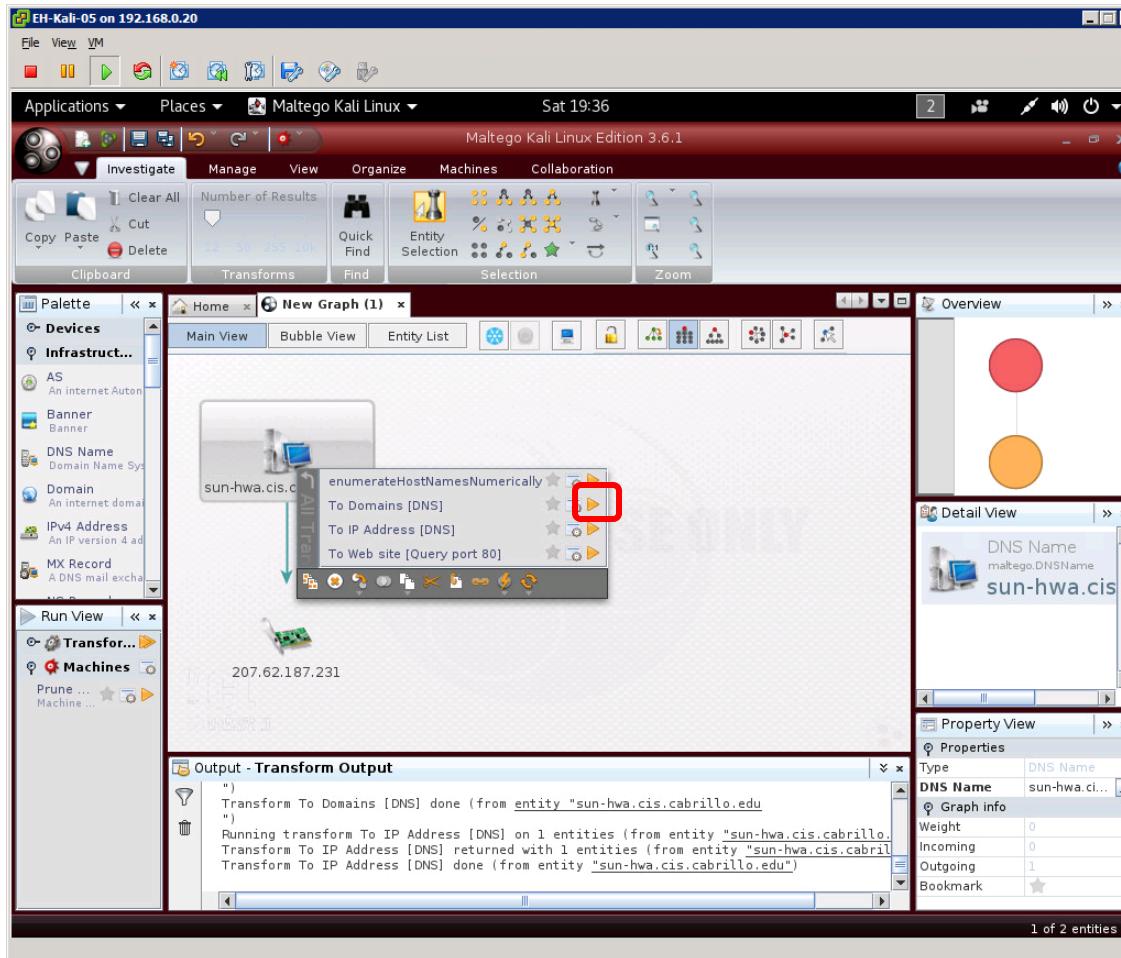
Run the "To IP Address [DNS]" transform to get the IP address.

# Maltego



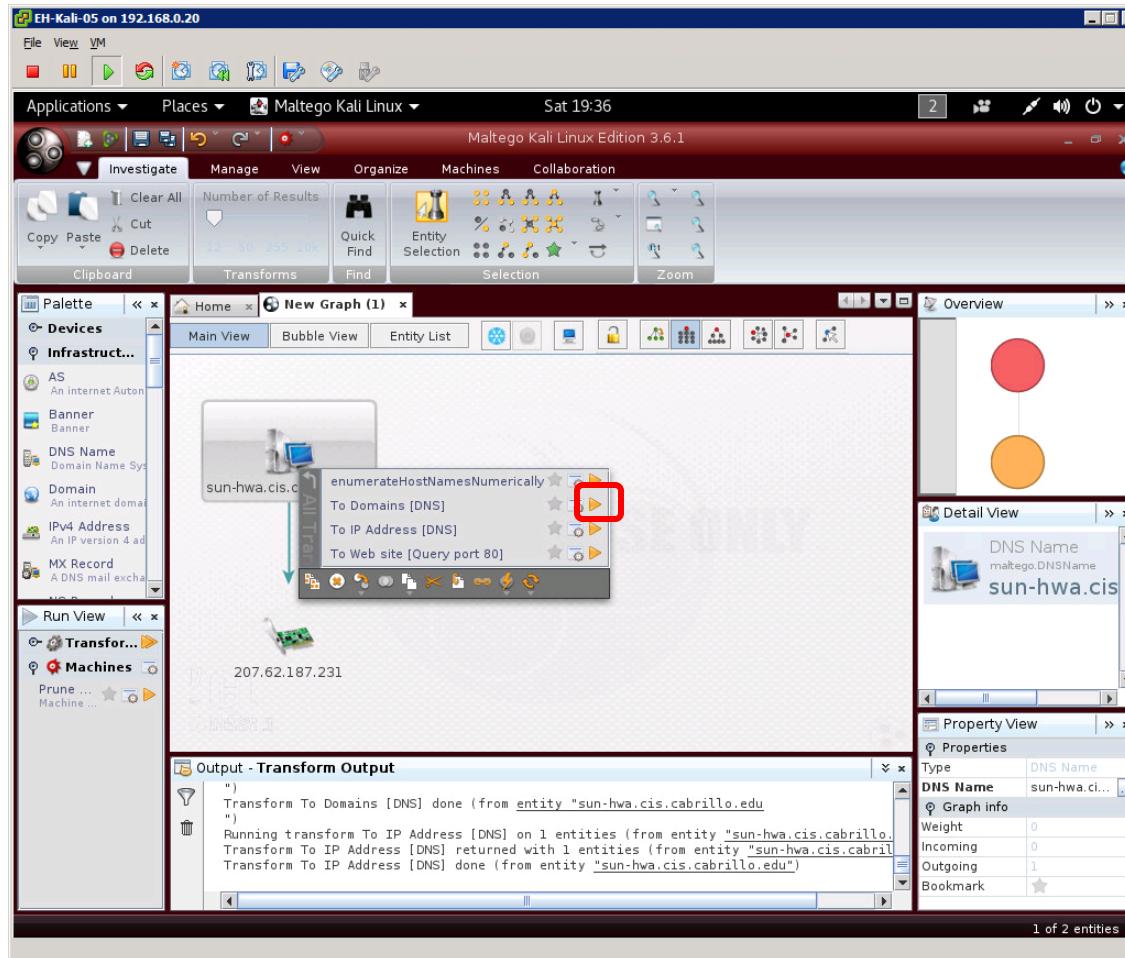
*The IP address shows now below the little NIC icon.*

# Maltego



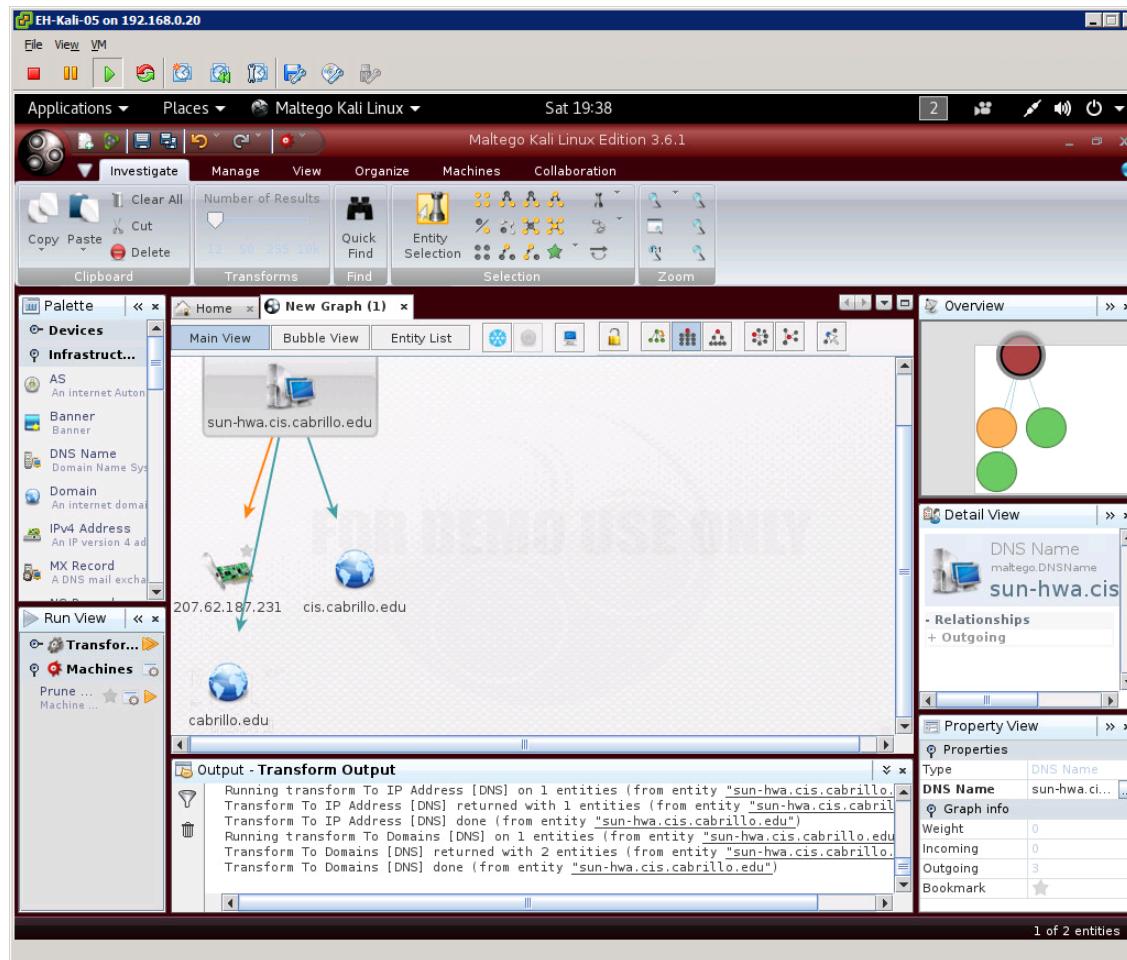
*Run the To Domains [DNS] transform to get the domain.*

# Maltego



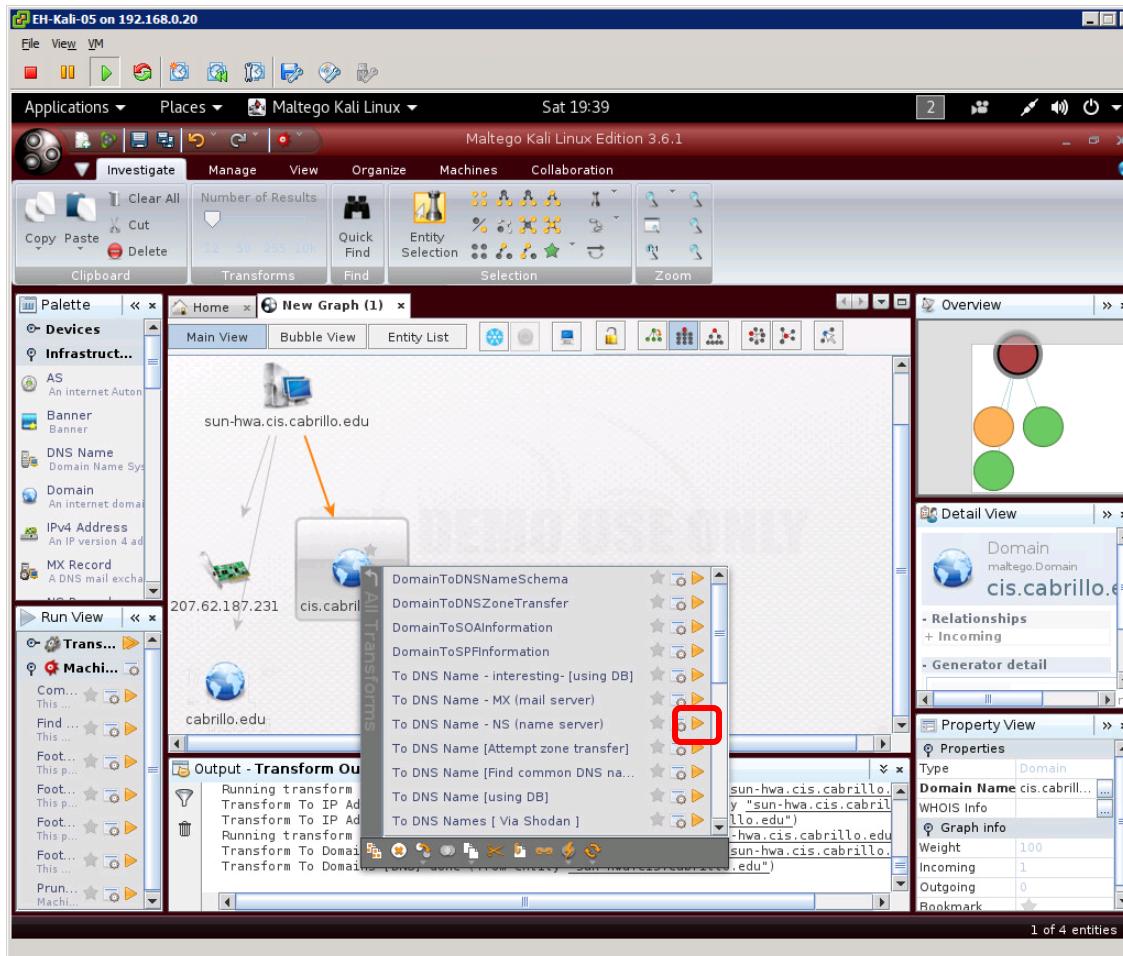
Run the "To Domains [DNS]" transform to get the domains.

# Maltego



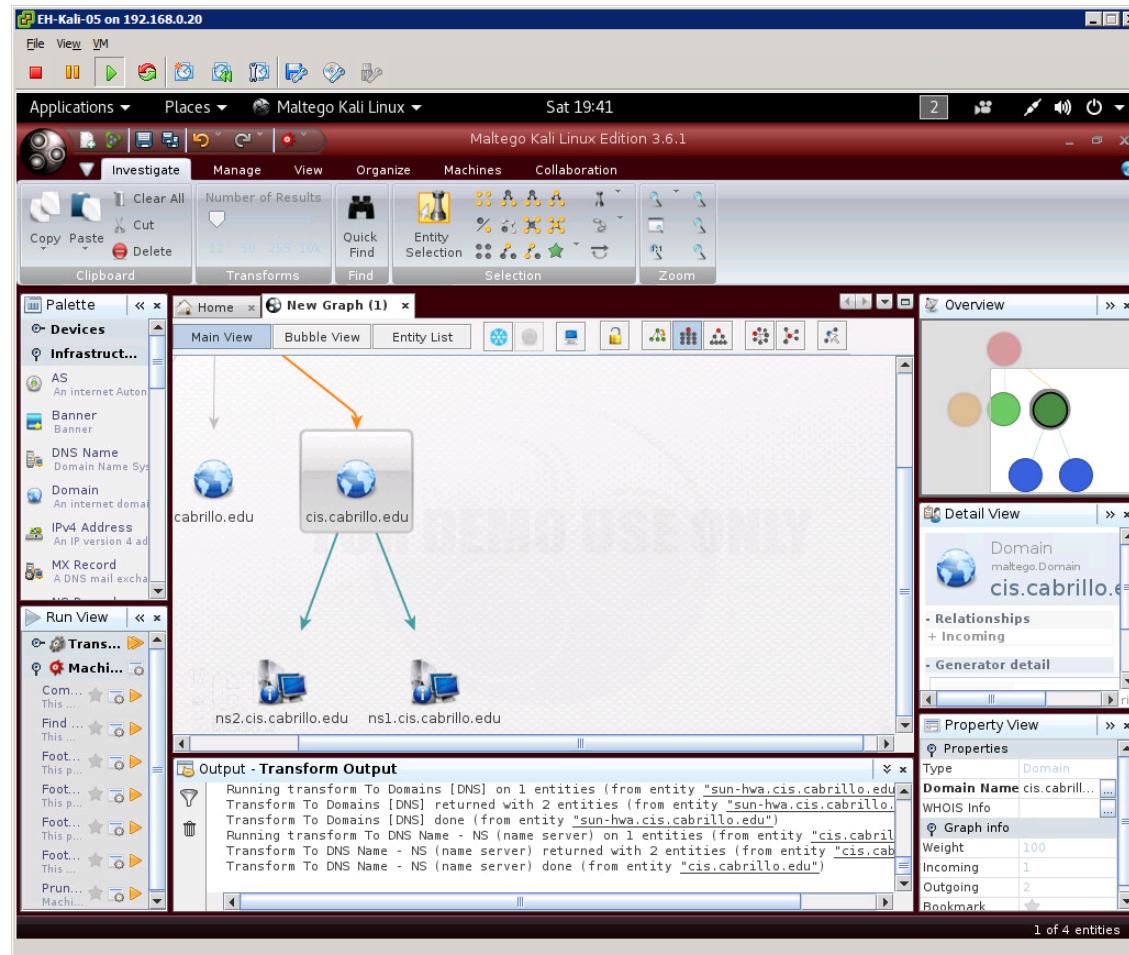
*Notice both the domain and sub-domain appear.*

# Maltego



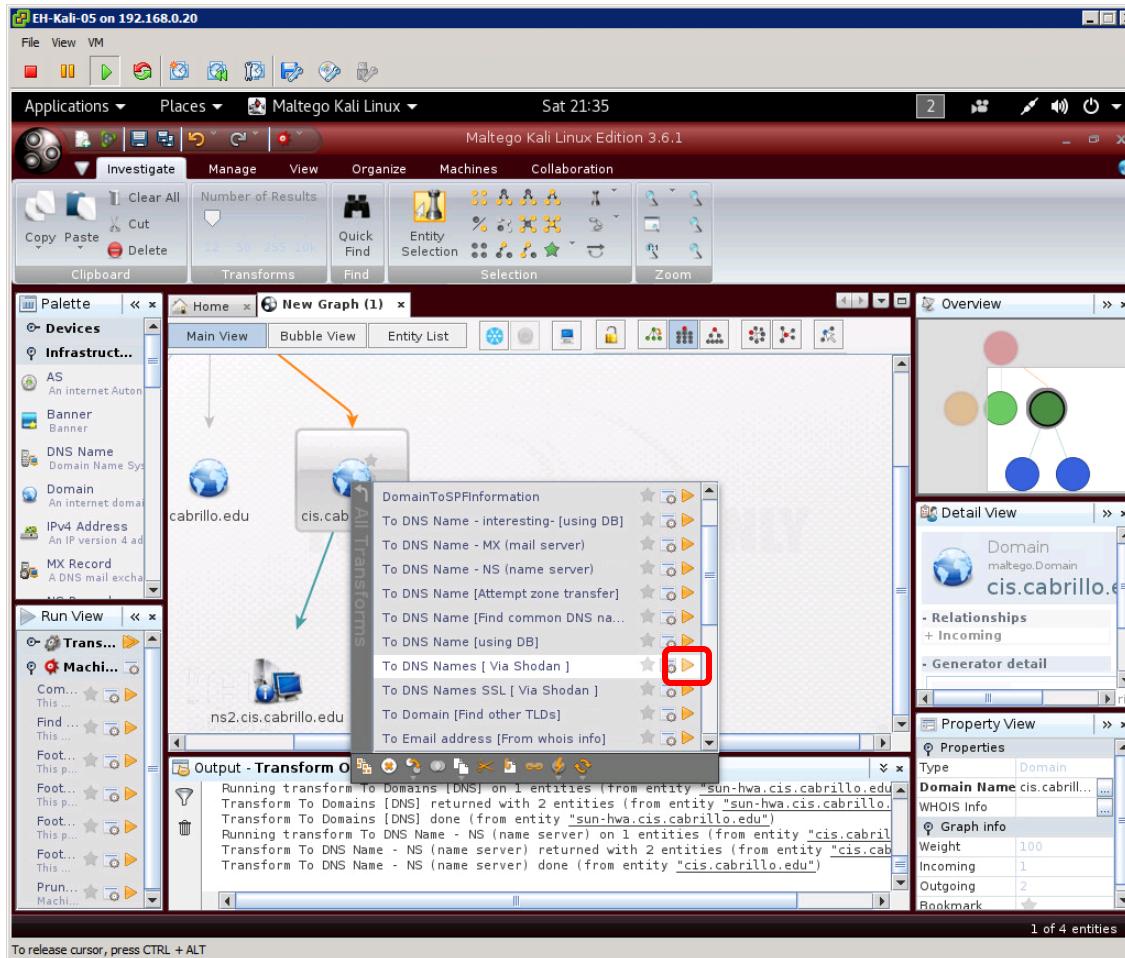
Select the sub-domain and run the "To DNS Name - NS (Name Server)" transform to get the name servers.

# Maltego



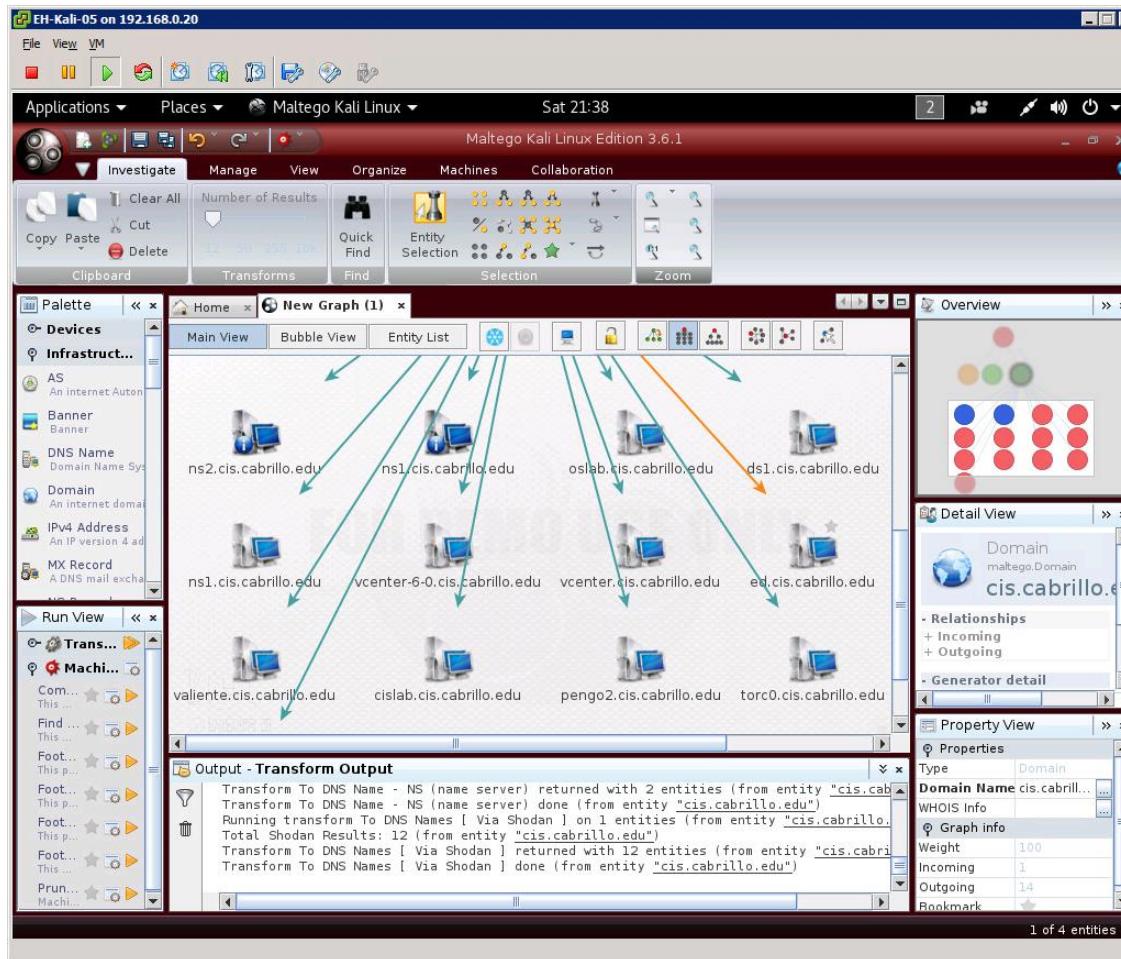
*Notice both the domain and sub-domain appear.*

# Maltego



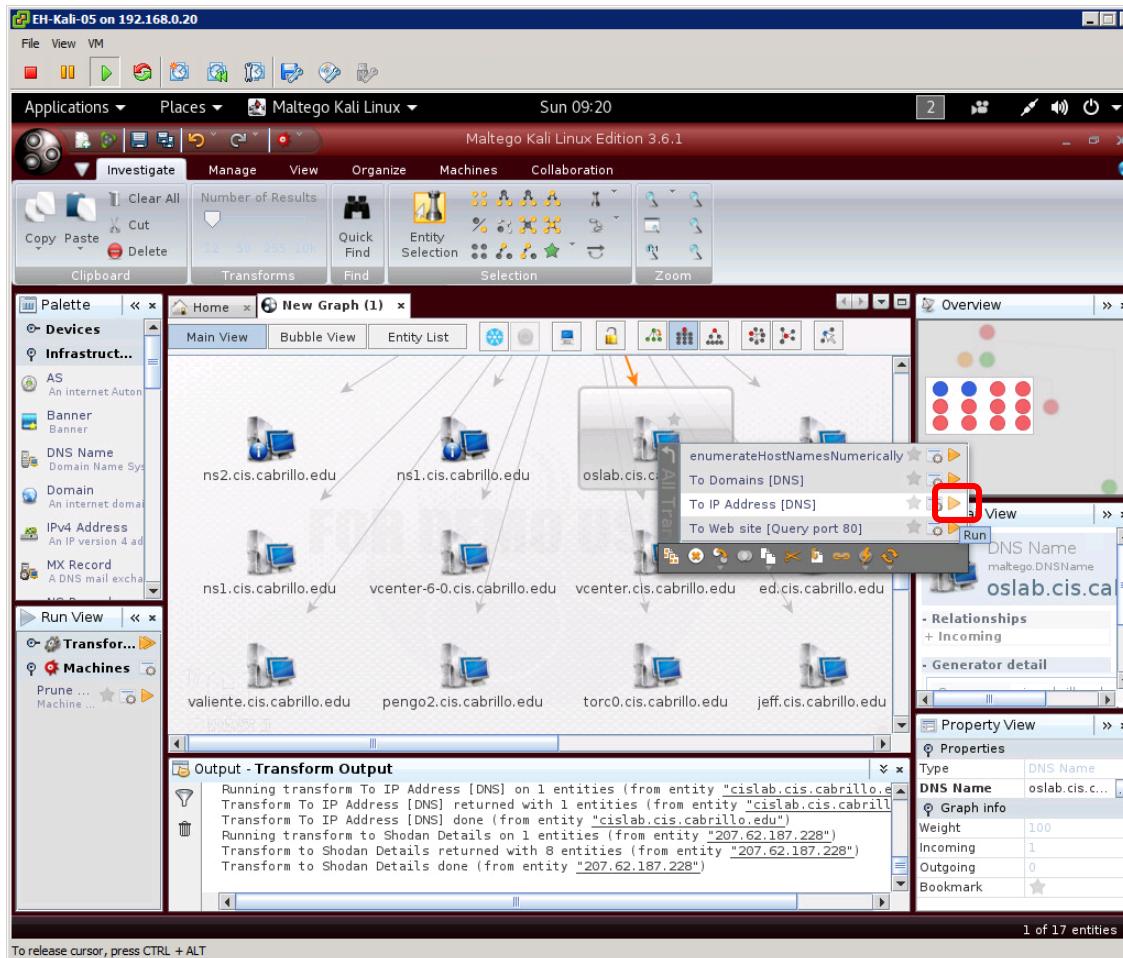
Select the sub-domain and run the "To DNS Names [ Via Shodan ]" to get the names of other hosts in the sub-domain.

# Maltego



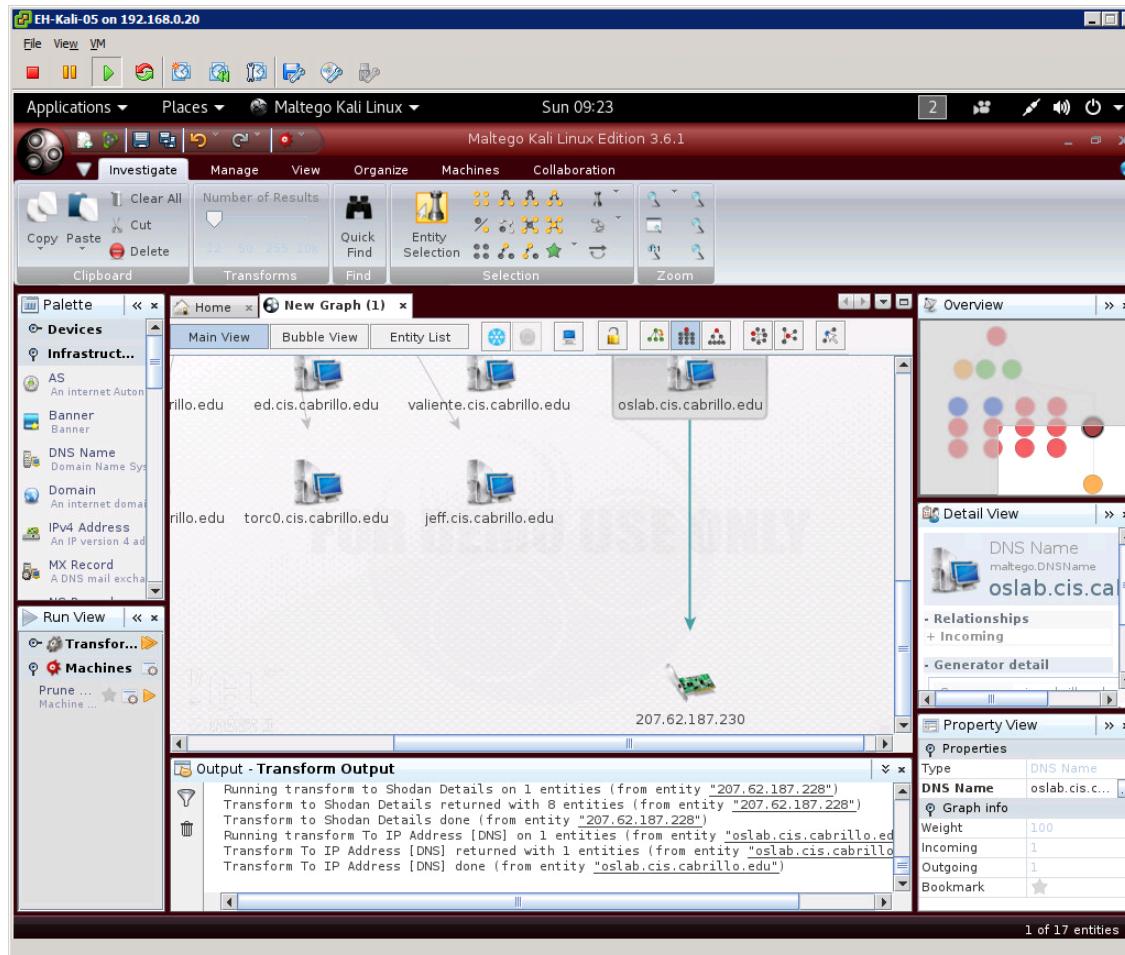
*Notice we get 12 (the limit of the free version) hosts on the sub-domain.*

# Maltego



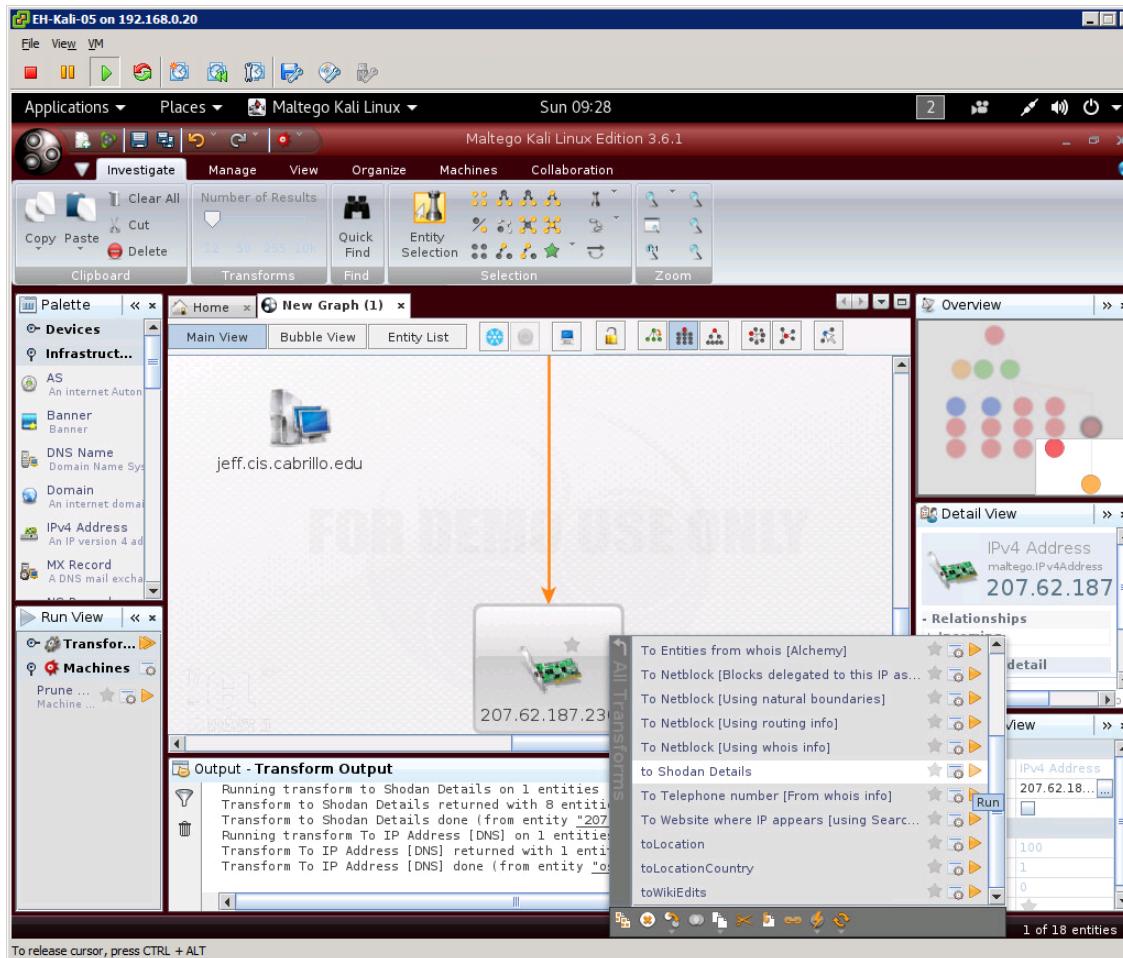
Select *oslab* and run the "*To IP Address [DNS]*" to get the IP address.

# Maltego



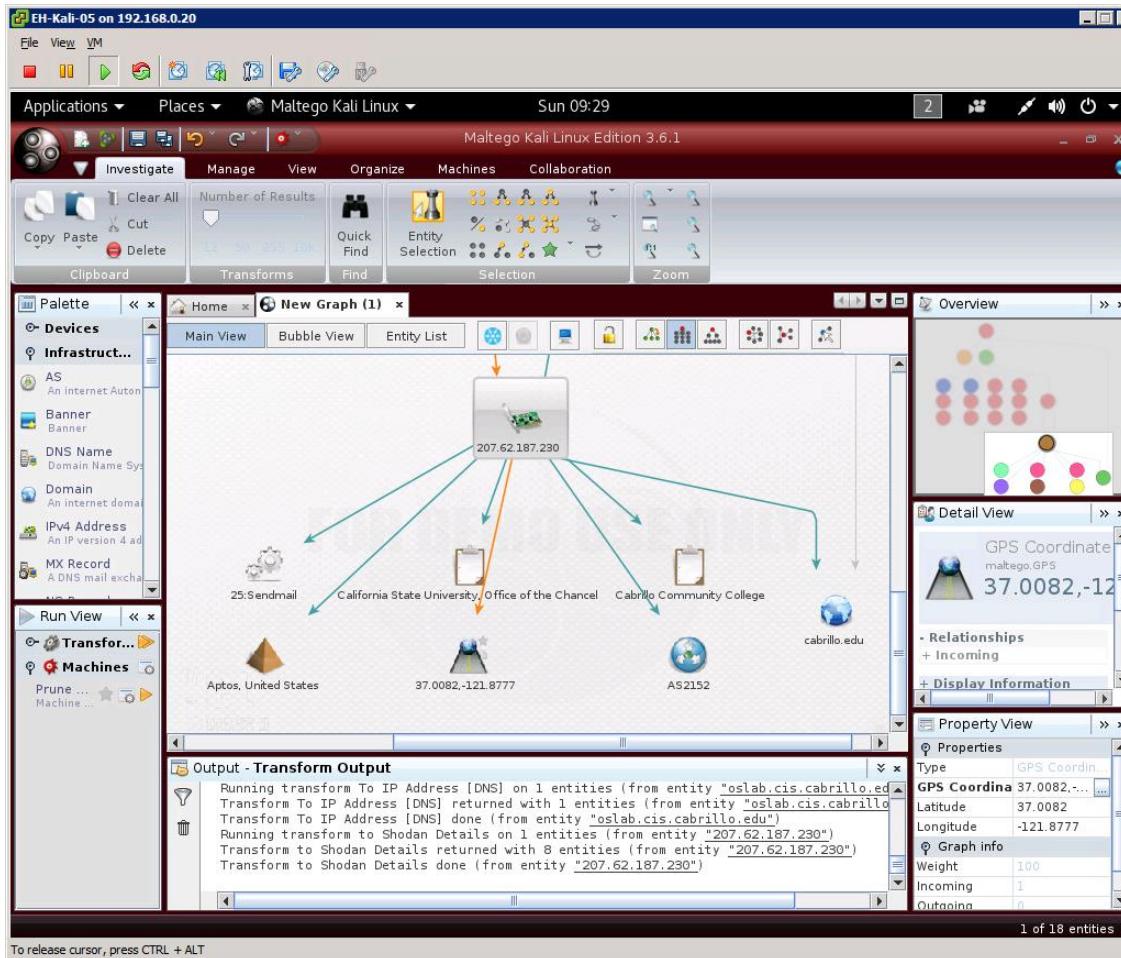
*Notice we have the external IP address now.*

# Maltego



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

# Maltego

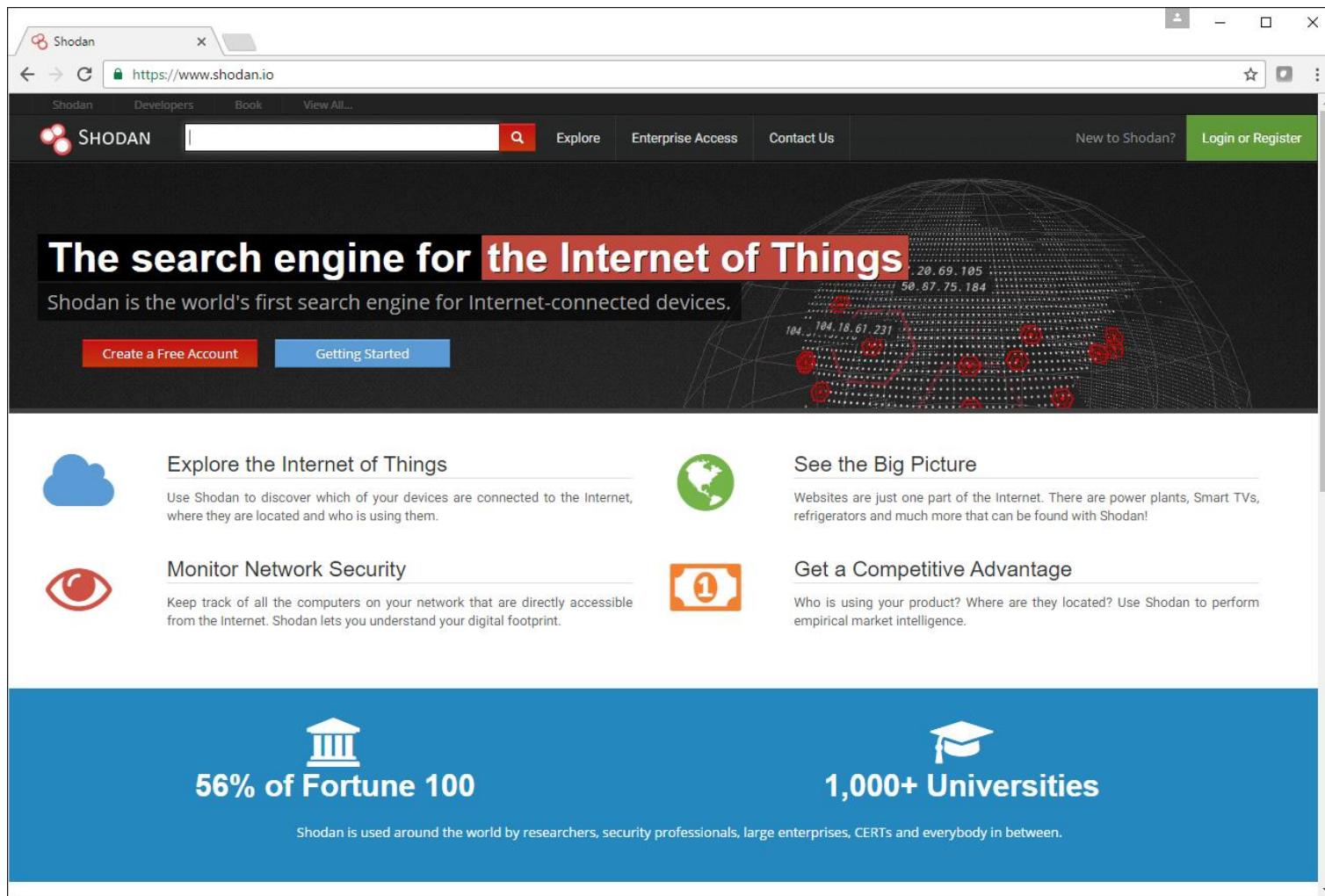


*Notice we have related port 25 (SMTP) info, geographic location, organizations, autonomous system number information.*



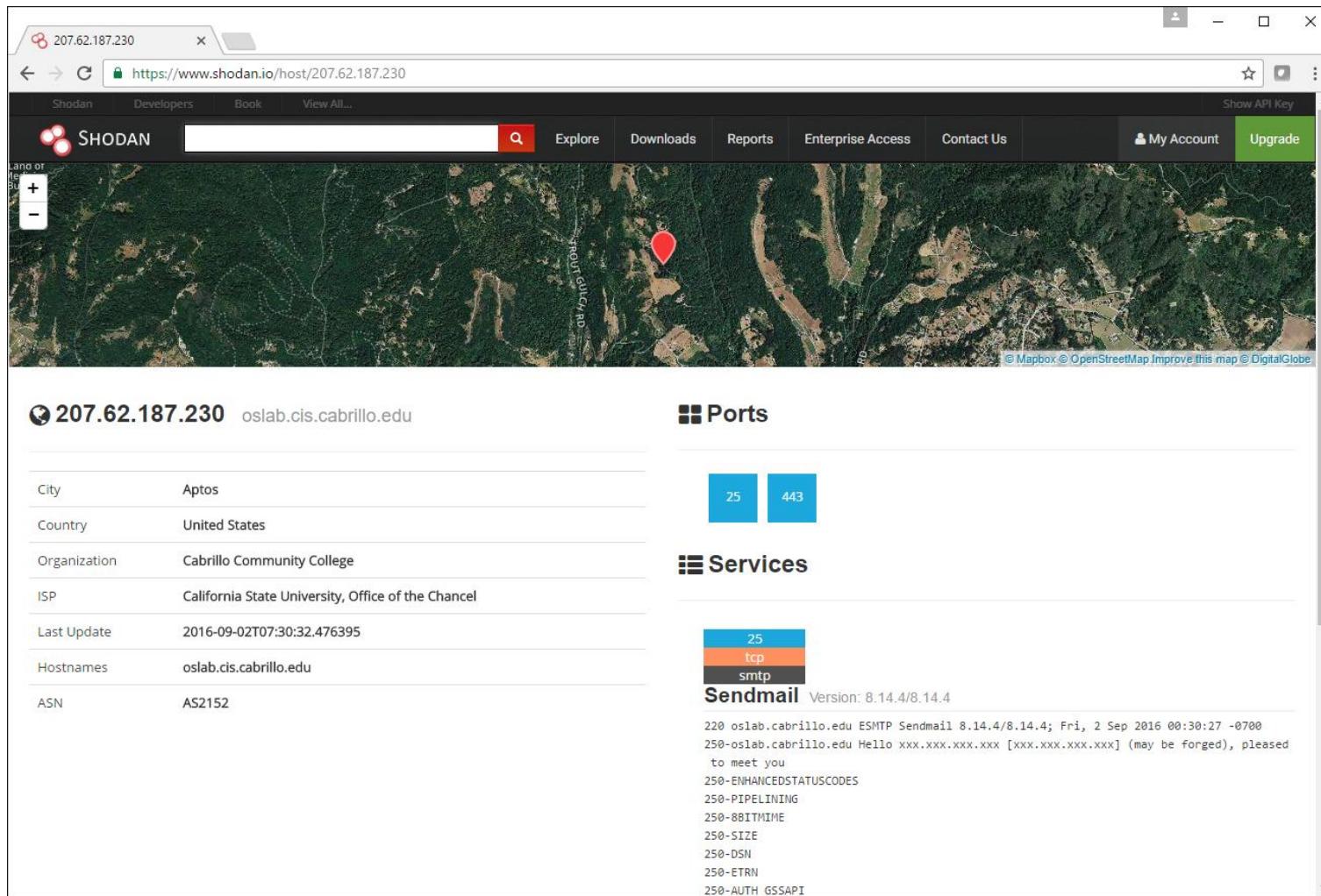
# shodan

## SHODAN



The screenshot shows the Shodan search engine homepage. At the top, there is a navigation bar with links for "Shodan", "Developers", "Book", "View All...", "Explore", "Enterprise Access", "Contact Us", "New to Shodan?", and "Login or Register". Below the navigation bar, a large banner features the text "The search engine for the Internet of Things" in white on a red background, followed by the subtext "Shodan is the world's first search engine for Internet-connected devices." There are two buttons: "Create a Free Account" (red) and "Getting Started" (blue). To the right of the banner is a 3D globe visualization showing numerous red dots representing connected devices, with some IP addresses like "20.69.105", "50.87.75.184", and "104.18.61.231" labeled. Below the banner, there are four main sections: "Explore the Internet of Things" (cloud icon), "Monitor Network Security" (eye icon), "See the Big Picture" (globe icon), and "Get a Competitive Advantage" (dollar sign icon). At the bottom, there are two large blue callout boxes: one for "56% of Fortune 100" featuring a building icon, and another for "1,000+ Universities" featuring a graduation cap icon. A footer note states: "Shodan is used around the world by researchers, security professionals, large enterprises, CERTs and everybody in between."

## SHODAN



207.62.187.230 oslab.cis.cabrillo.edu

City	Aptos
Country	United States
Organization	Cabrillo Community College
ISP	California State University, Office of the Chancery
Last Update	2016-09-02T07:30:32.476395
Hostnames	oslab.cis.cabrillo.edu
ASN	AS2152

**Ports**

25    443

**Services**

25  
tcp  
smtp

**Sendmail** Version: 8.14.4/8.14.4

```
220 oslab.cabrillo.edu ESMTP Sendmail 8.14.4/8.14.4; Fri, 2 Sep 2016 00:30:27 -0700
250-oslab.cabrillo.edu Hello xxx.xxx.xxx.xxx [xxx.xxx.xxx.xxx] (may be forged), pleased
to meet you
250-ENHANCEDSTATUSCODES
250-PIPELINING
250-8BITMIME
250-SIZE
250-DSN
250-ETRN
250-AUTH GSSAPI
```

# 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

Find the IP address for sun-hwa.cis.cabrillo.edu and then have SHODAN look at it.

What OS and web server are running on Sun-Hwa?

*Write your answer in the chat window*

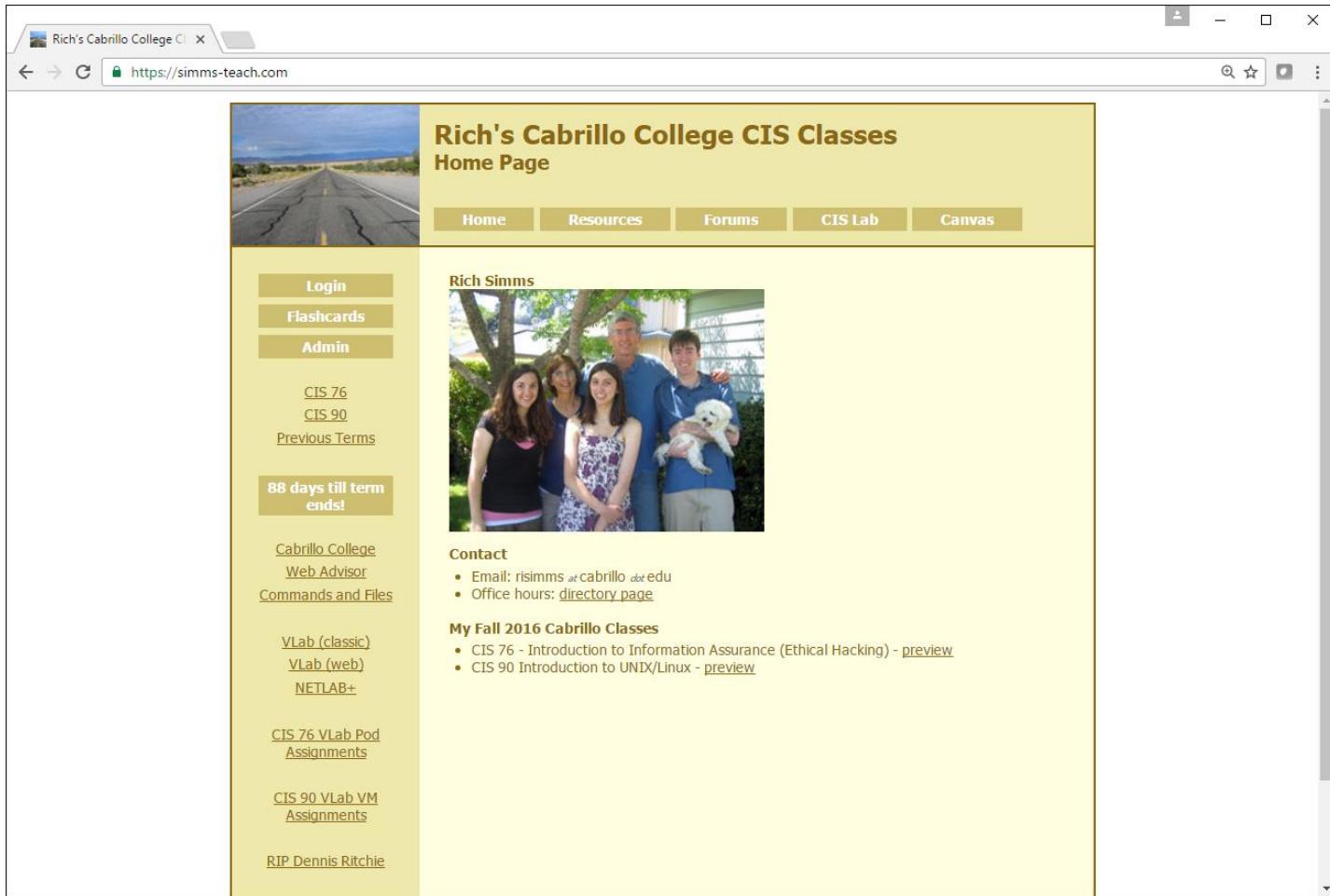
# Website Information

## Netcraft

## Netcraft

The screenshot shows the homepage of the Netcraft website (<https://www.netcraft.com>). The top navigation bar includes links for Home, News, Anti-Phishing, Security Testing, Internet Data Mining, Performance, and About Netcraft. The main content area features a "Market Share for Top Servers Across All Domains" chart and a section titled "Understand your Competitors" with a list of analysis services. Below this is a call-to-action button "Explore the internet's growth". The right sidebar contains sections for "Latest News", "Get in Touch" (with phone number +44 (0) 1225 447500 and email info@netcraft.com), "What's that site running?", "Audited by Netcraft" (with a link to verify a site's audit), and "Report Suspicious URL". The bottom left of the page has a "Solutions For..." section with links for Banks, Certificate Authorities, Domain Registrars, Domain Registries, Hosting Companies, Investors and Venture Capitalists, Online Merchants, Security Providers, and Software Industry.

## My Website



The screenshot shows a web browser window displaying the "Rich's Cabrillo College CIS Classes Home Page". The page has a yellow header bar with the title "Rich's Cabrillo College CIS Classes Home Page". Below the header is a navigation menu with links to "Home", "Resources", "Forums", "CIS Lab", and "Canvas". On the left side, there is a sidebar with links for "Login", "Flashcards", "Admin", "CIS 76", "CIS 90", and "Previous Terms". A large digital clock on the left side shows "88 days till term ends!". Below the sidebar are links for "Cabrillo College", "Web Advisor", "Commands and Files", "VLab (classic)", "VLab (web)", and "NETLAB+". Further down are links for "CIS 76 VLab Pod Assignments", "CIS 90 VLab VM Assignments", and "RIP Dennis Ritchie". The main content area features a photo of Rich Simms and his family, along with contact information and a list of fall 2016 classes.

**Rich's Cabrillo College CIS Classes  
Home Page**

[Home](#) [Resources](#) [Forums](#) [CIS Lab](#) [Canvas](#)

[Login](#)  
[Flashcards](#)  
[Admin](#)

[CIS 76](#)  
[CIS 90](#)  
[Previous Terms](#)

**88 days till term ends!**

[Cabrillo College](#)  
[Web Advisor](#)  
[Commands and Files](#)

[VLab \(classic\)](#)  
[VLab \(web\)](#)  
[NETLAB+](#)

[CIS 76 VLab Pod Assignments](#)

[CIS 90 VLab VM Assignments](#)

[RIP Dennis Ritchie](#)

**Rich Simms**



**Contact**

- Email: [rismms at cabrillo dot edu](mailto:rismms@cabrillo.edu)
- Office hours: [directory page](#)

**My Fall 2016 Cabrillo Classes**

- CIS 76 - Introduction to Information Assurance (Ethical Hacking) - [preview](#)
- CIS 90 Introduction to UNIX/Linux - [preview](#)

# Netcraft

Site report for simms-teach.com

toolbar.netcraft.com/site\_report?url=http://simms-teach.com

**NETCRAFT**

**DATAPIPE Strategic Global Data Center Locations**

**Site report for simms-teach.com**

Search... ↗

**Netcraft Extension**

- ⊕ Home
- ⊕ Download Now!
- ⊕ Report a Phish
- ⊕ Site Report
- ⊕ Top Reporters
- ⊕ Incentives for reporters
- ⊕ Phishiest TLDs
- ⊕ Phishiest Countries
- ⊕ Phishiest Hosters
- ⊕ Phishiest Certificate Authorities
- ⊕ Phishing Map
- ⊕ Takedown Map
- ⊕ Most Popular Websites
- ⊕ Branded Extensions
- ⊕ Tell a Friend

**Phishing & Fraud**

- ⊕ Phishing Site Feed
- ⊕ Hosting Phishing Alerts
- ⊕ SSL CA Phishing Alerts
- ⊕ Protection for TLDs against Phishing and Malware
- ⊕ Deceptive Domain Score
- ⊕ Bank Fraud Detection
- ⊕ Phishing Site Countermeasures

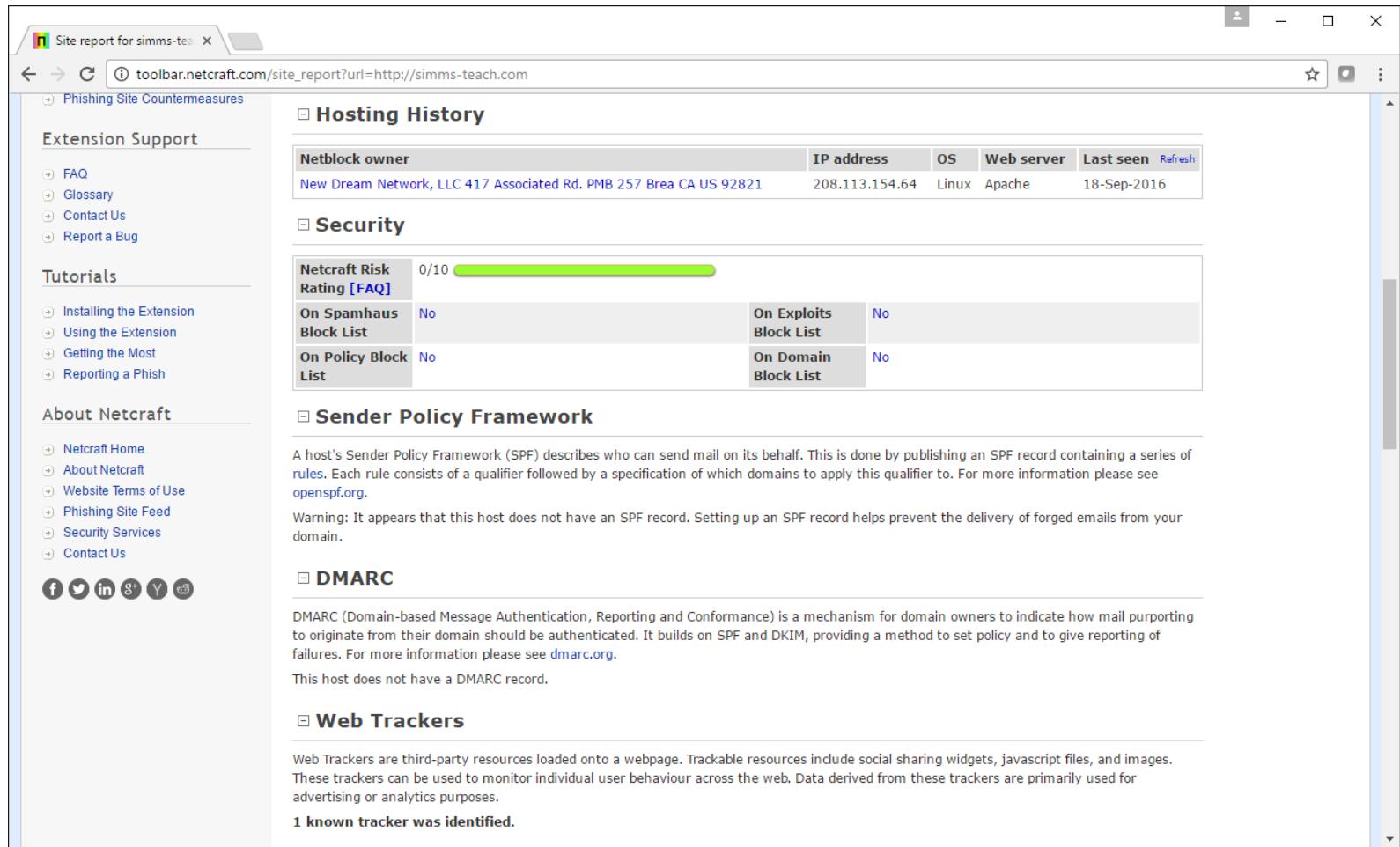
**Background**

Site title	Rich's Cabrillo College CIS Classes - Home Page	Date first seen	July 2008
Site rank	1200256	Primary language	English
Description	Rich Simms site for Cabrillo College Linux students		
Keywords	simms-teach, Linux, UNIX, Cabrillo, college		

**Network**

Site	http://simms-teach.com	Netblock Owner	New Dream Network, LLC
Domain	simms-teach.com	Nameserver	ns1.dreamhost.com
IP address	208.113.154.64	DNS admin	hostmaster@dreamhost.com
IPv6 address	Not Present	Reverse DNS	apache2-dap.giles.dreamhost.com
Domain registrar	dreamhost.com	Nameserver organisation	whois.dreamhost.com
Organisation	A HAPPY DREAMHOST CUSTOMER, C/O SIMMS-TEACH.COM, BREA, 92821, US	Hosting company	Dreamhost
Top Level Domain	Commercial entities (.com)	DNS Security Extensions	unknown
Hosting country	US		

# Netcraft



The screenshot shows a detailed site report for the URL <http://simms-teach.com>. The report includes sections for Extension Support, Tutorials, and About Netcraft, along with a main content area for Hosting History, Security, Sender Policy Framework, DMARC, and Web Trackers.

**Hosting History**

Netblock owner	IP address	OS	Web server	Last seen
New Dream Network, LLC 417 Associated Rd. PMB 257 Brea CA US 92821	208.113.154.64	Linux	Apache	18-Sep-2016

**Security**

Netcraft Risk Rating [FAQ]	0/10
On Spamhaus Block List	No
On Policy Block List	No
On Exploits Block List	No
On Domain Block List	No

**Sender Policy Framework**

A host's Sender Policy Framework (SPF) describes who can send mail on its behalf. This is done by publishing an SPF record containing a series of rules. Each rule consists of a qualifier followed by a specification of which domains to apply this qualifier to. For more information please see [openspf.org](https://www.openspf.org).

Warning: It appears that this host does not have an SPF record. Setting up an SPF record helps prevent the delivery of forged emails from your domain.

**DMARC**

DMARC (Domain-based Message Authentication, Reporting and Conformance) is a mechanism for domain owners to indicate how mail purporting to originate from their domain should be authenticated. It builds on SPF and DKIM, providing a method to set policy and to give reporting of failures. For more information please see [dmarc.org](https://www.dmarc.org).

This host does not have a DMARC record.

**Web Trackers**

Web Trackers are third-party resources loaded onto a webpage. Trackable resources include social sharing widgets, javascript files, and images. These trackers can be used to monitor individual user behaviour across the web. Data derived from these trackers are primarily used for advertising or analytics purposes.

**1 known tracker was identified.**

# Netcraft

Site report for simms-teach.com toolbar.netcraft.com/site\_report?url=http://simms-teach.com

### Web Trackers

Web Trackers are third-party resources loaded onto a webpage. Trackable resources include social sharing widgets, javascript files, and images. These trackers can be used to monitor individual user behaviour across the web. Data derived from these trackers are primarily used for advertising or analytics purposes.

1 known tracker was identified.

**Companies**

W3C (1)

**Categories**

Widget (1)

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 September 2016

#### Server-Side

Includes all the main technologies that Netcraft detects as running on the server such as PHP.

Technology	Description	Popular sites using this technology
PHP	PHP is supported and/or running	www.wired.com, www.imagefap.com, www.t411.ch
SSL	A cryptographic protocol providing communication security over the Internet	www.google.co.in, twitter.com, login.salesforce.com

#### Client-Side

Includes all the main technologies that run on the browser (such as JavaScript and Adobe Flash).

# Netcraft

The screenshot shows a web browser window displaying a site report from netcraft.com. The URL in the address bar is [toolbar.netcraft.com/site\\_report?url=http://simms-teach.com](http://toolbar.netcraft.com/site_report?url=http://simms-teach.com). The report is for the website [simms-teach.com](http://simms-teach.com).

**Client-Side**  
Includes all the main technologies that run on the browser (such as JavaScript and Adobe Flash).

Technology	Description	Popular sites using this technology
<a href="#">JavaScript</a>	Open source programming language commonly implemented as part of a web browser	<a href="http://www.bbc.co.uk">www.bbc.co.uk</a> , <a href="http://www.google.de">www.google.de</a> , <a href="http://www.linkedin.com">www.linkedin.com</a>

**Character Encoding**  
A character encoding system consists of a code that pairs each character from a given repertoire with something else such as a bit pattern, sequence of natural numbers, octets, or electrical pulses in order to facilitate the transmission of data (generally numbers or text) through telecommunication networks or for data storage.

Technology	Description	Popular sites using this technology
<a href="#">ISO-8859-1</a>	Latin alphabet no. 1	<a href="http://www.orange.fr">www.orange.fr</a> , <a href="http://www.amazon.co.uk">www.amazon.co.uk</a> , <a href="http://www.corriere.it">www.corriere.it</a>
<a href="#">UTF8</a>	UCS Transformation Format 8 bit	<a href="http://www.ebay.de">www.ebay.de</a> , <a href="http://www.googleadservices.com">www.googleadservices.com</a> , <a href="http://www.ebay.com">www.ebay.com</a>

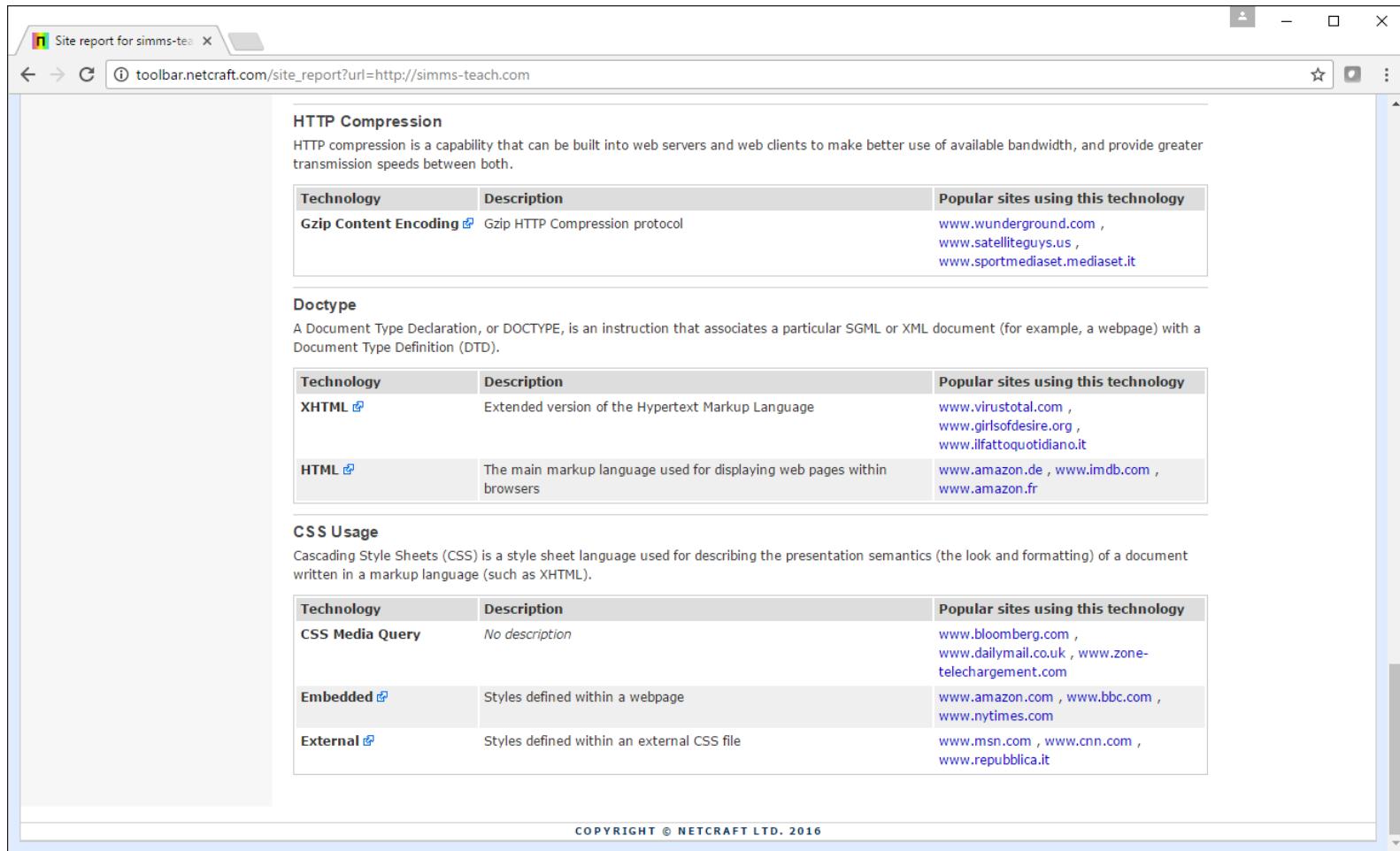
**HTTP Compression**  
HTTP compression is a capability that can be built into web servers and web clients to make better use of available bandwidth, and provide greater transmission speeds between both.

Technology	Description	Popular sites using this technology
<a href="#">Gzip Content Encoding</a>	Gzip HTTP Compression protocol	<a href="http://www.wunderground.com">www.wunderground.com</a> , <a href="http://www.satelliteguys.us">www.satelliteguys.us</a> , <a href="http://www.sportmediaset.mediaset.it">www.sportmediaset.mediaset.it</a>

**Dctype**  
A Document Type Declaration, or DOCTYPE, is an instruction that associates a particular SGML or XML document (for example, a webpage) with a Document Type Definition (DTD).

Technology	Description	Popular sites using this technology
<a href="#">XHTML</a>	Extended version of the Hypertext Markup Language	<a href="http://www.virustotal.com">www.virustotal.com</a> , <a href="http://www.girlsofdesire.org">www.girlsofdesire.org</a> , <a href="http://www.lifattoquotidiano.it">www.lifattoquotidiano.it</a>

# Netcraft



**HTTP Compression**  
HTTP compression is a capability that can be built into web servers and web clients to make better use of available bandwidth, and provide greater transmission speeds between both.

Technology	Description	Popular sites using this technology
Gzip Content Encoding <a href="#">?</a>	Gzip HTTP Compression protocol	<a href="#">www.wunderground.com</a> , <a href="#">www.satelliteguys.us</a> , <a href="#">www.sportmediaset.mediaset.it</a>

**Doctype**  
A Document Type Declaration, or DOCTYPE, is an instruction that associates a particular SGML or XML document (for example, a webpage) with a Document Type Definition (DTD).

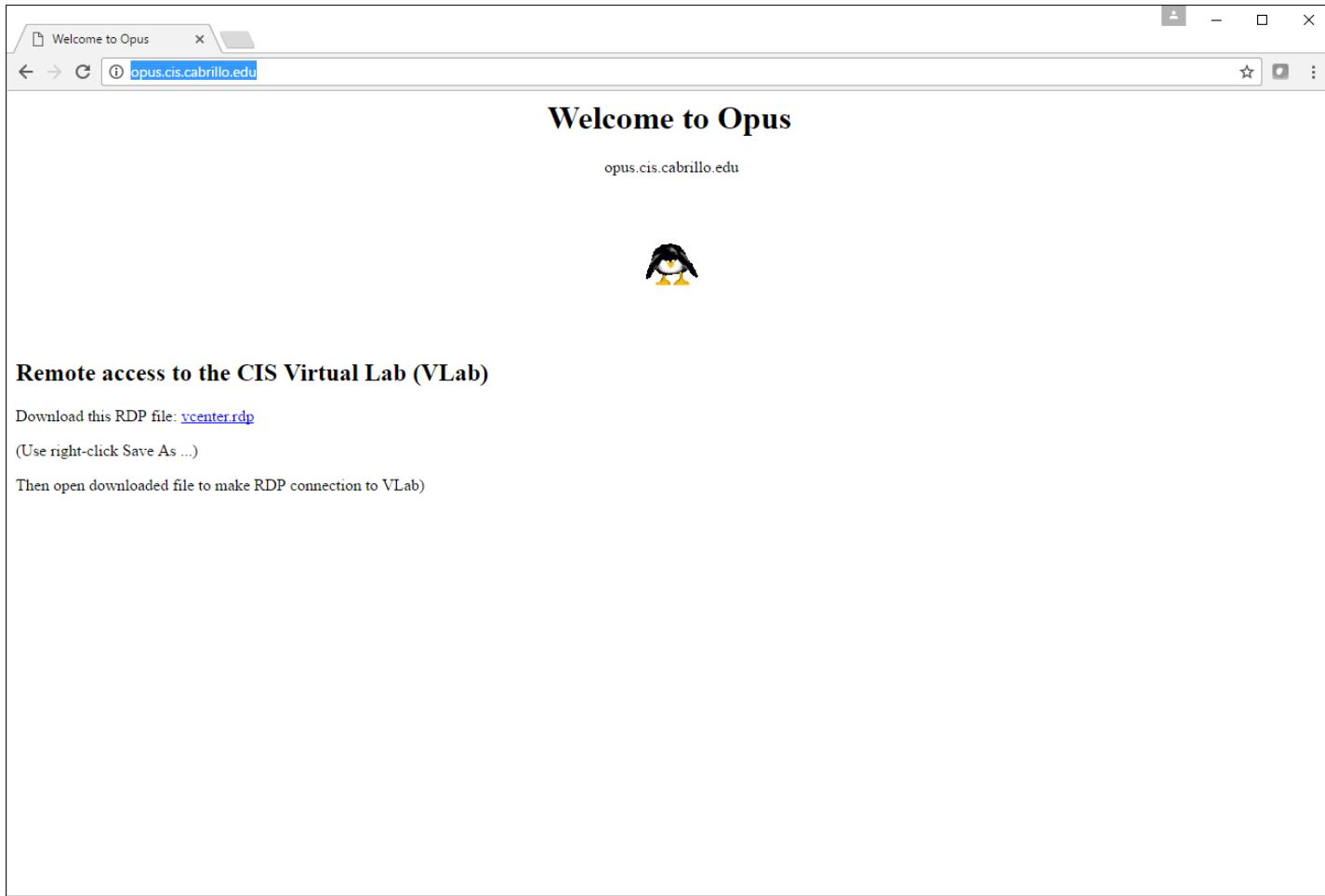
Technology	Description	Popular sites using this technology
XHTML <a href="#">?</a>	Extended version of the Hypertext Markup Language	<a href="#">www.virustotal.com</a> , <a href="#">www.girlsdesire.org</a> , <a href="#">www.ilfattoquotidiano.it</a>
HTML <a href="#">?</a>	The main markup language used for displaying web pages within browsers	<a href="#">www.amazon.de</a> , <a href="#">www.imdb.com</a> , <a href="#">www.amazon.fr</a>

**CSS Usage**  
Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation semantics (the look and formatting) of a document written in a markup language (such as XHTML).

Technology	Description	Popular sites using this technology
CSS Media Query	No description	<a href="#">www.bloomberg.com</a> , <a href="#">www.dailymail.co.uk</a> , <a href="#">www.zone-telechargement.com</a>
Embedded <a href="#">?</a>	Styles defined within a webpage	<a href="#">www.amazon.com</a> , <a href="#">www.bbc.com</a> , <a href="#">www.nytimes.com</a>
External <a href="#">?</a>	Styles defined within an external CSS file	<a href="#">www.msn.com</a> , <a href="#">www.cnn.com</a> , <a href="#">www.repubblica.it</a>

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## Opus website



The screenshot shows a web browser window with the title "Welcome to Opus". The address bar contains the URL "opus.cis.cabrillo.edu". The main content area displays the text "Welcome to Opus" and the URL "opus.cis.cabrillo.edu" below it. A small penguin icon is centered on the page. Below the main content, there is a section titled "Remote access to the CIS Virtual Lab (VLab)". It includes instructions to download an RDP file named "vcenter.rdp" (by right-clicking and saving) and then opening it to make an RDP connection to VLab.

Welcome to Opus

opus.cis.cabrillo.edu



**Remote access to the CIS Virtual Lab (VLab)**

Download this RDP file: [vcenter.rdp](#)  
(Use right-click Save As ...)

Then open downloaded file to make RDP connection to VLab

## Netcraft

Site report for opus.cis.cabrillo.edu

toolbar.netcraft.com/site\_report?url=http://opus.cis.cabrillo.edu/

**NETCRAFT**

Site report for opus.cis.cabrillo.edu

Search...

**Netcraft Extension**

- [+ Home](#)
- [+ Download Now!](#)
- [+ Report a Phish](#)
- [+ Site Report](#)
- [+ Top Reporters](#)
- [+ Incentives for reporters](#)
- [+ Phishiest TLDs](#)
- [+ Phishiest Countries](#)
- [+ Phishiest Hosters](#)
- [+ Phishiest Certificate Authorities](#)
- [+ Phishing Map](#)
- [+ Takedown Map](#)
- [+ Most Popular Websites](#)
- [+ Branded Extensions](#)
- [+ Tell a Friend](#)

**Phishing & Fraud**

- [+ Phishing Site Feed](#)
- [+ Hosting Phishing Alerts](#)
- [+ SSL CA Phishing Alerts](#)
- [+ Protection for TLDs against Phishing and Malware](#)
- [+ Deceptive Domain Score](#)
- [+ Bank Fraud Detection](#)
- [+ Phishing Site Countermeasures](#)

**Background**

Site title	Welcome to Opus	Date first seen	December 2014
Site rank		Primary language	English
Description	Not Present		
Keywords	Not Present		

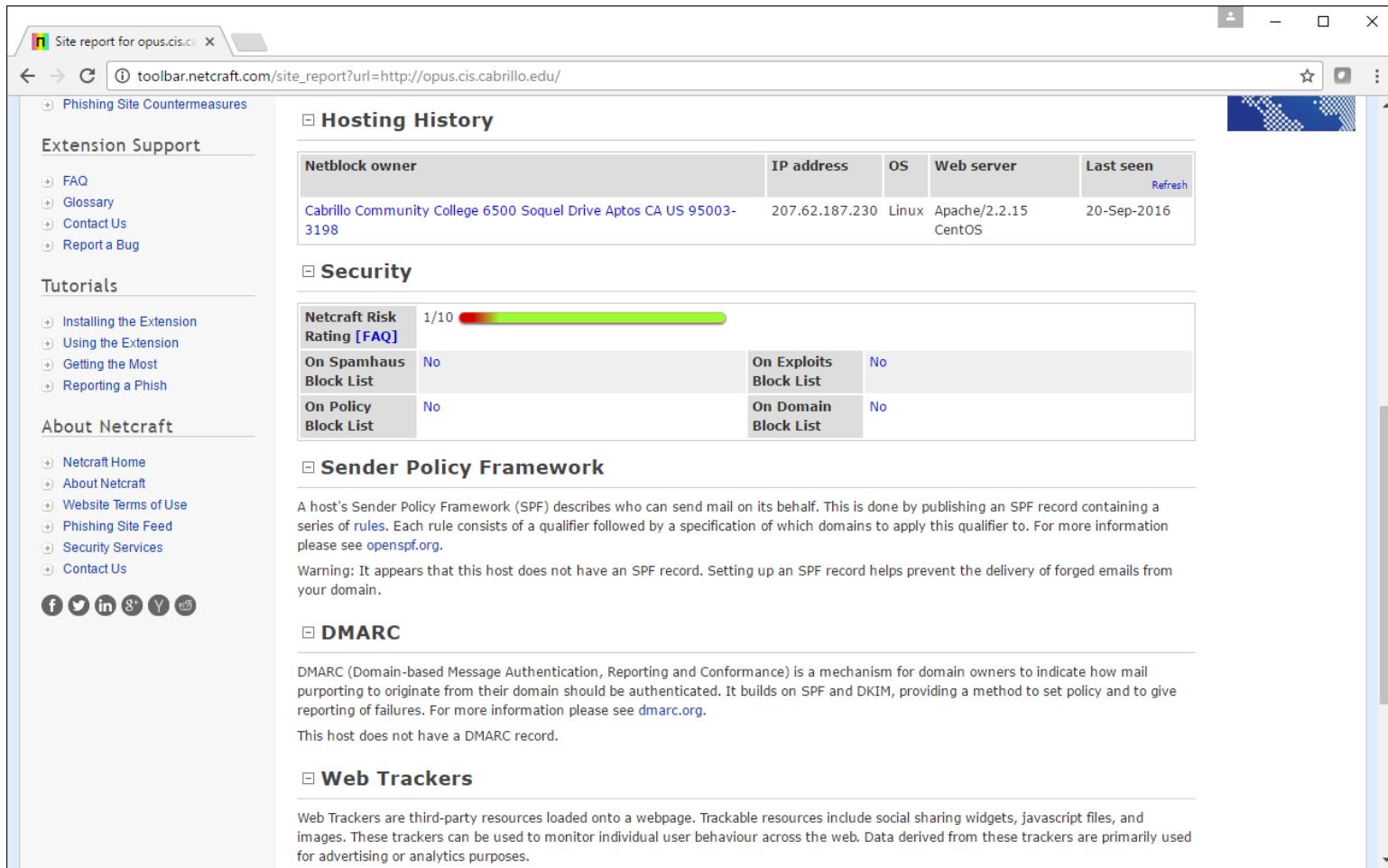
**Network**

Site	http://opus.cis.cabrillo.edu	Netblock Owner	Cabrillo Community College
Domain	cabrillo.edu	Nameserver	lola.cabrillo.edu
IP address	207.62.187.230	DNS admin	netadmin@cabrillo.edu
IPv6 address	2607:f380:80ff:1425:0:0:0:230	Reverse DNS	unknown
Domain registrar	educause.net	Nameserver organisation	whois.educause.net
Organisation	Cabrillo Community College District, 6500 Soquel Drive, Aptos, 95003, United States	Hosting company	cabrillo.edu
Top Level Domain	Educational entities (.edu)	DNS Security Extensions	unknown
Hosting country	US		

**Global Data Center Locations**

**DATAPIPE**

# Netcraft



The screenshot shows the Netcraft site report for [opus.cis.cabrillo.edu/](http://opus.cis.cabrillo.edu/). The report includes sections for Hosting History, Security, Sender Policy Framework, DMARC, and Web Trackers.

**Hosting History:**

Netblock owner	IP address	OS	Web server	Last seen
Cabrillo Community College 6500 Soquel Drive Aptos CA US 95003-3198	207.62.187.230	Linux	Apache/2.2.15 Centos	20-Sep-2016

**Security:**

Netcraft Risk Rating [FAQ]	1/10
On Spanhaus Block List	No
On Policy Block List	No

**Sender Policy Framework:**

A host's Sender Policy Framework (SPF) describes who can send mail on its behalf. This is done by publishing an SPF record containing a series of rules. Each rule consists of a qualifier followed by a specification of which domains to apply this qualifier to. For more information please see [openspf.org](http://openspf.org).

Warning: It appears that this host does not have an SPF record. Setting up an SPF record helps prevent the delivery of forged emails from your domain.

**DMARC:**

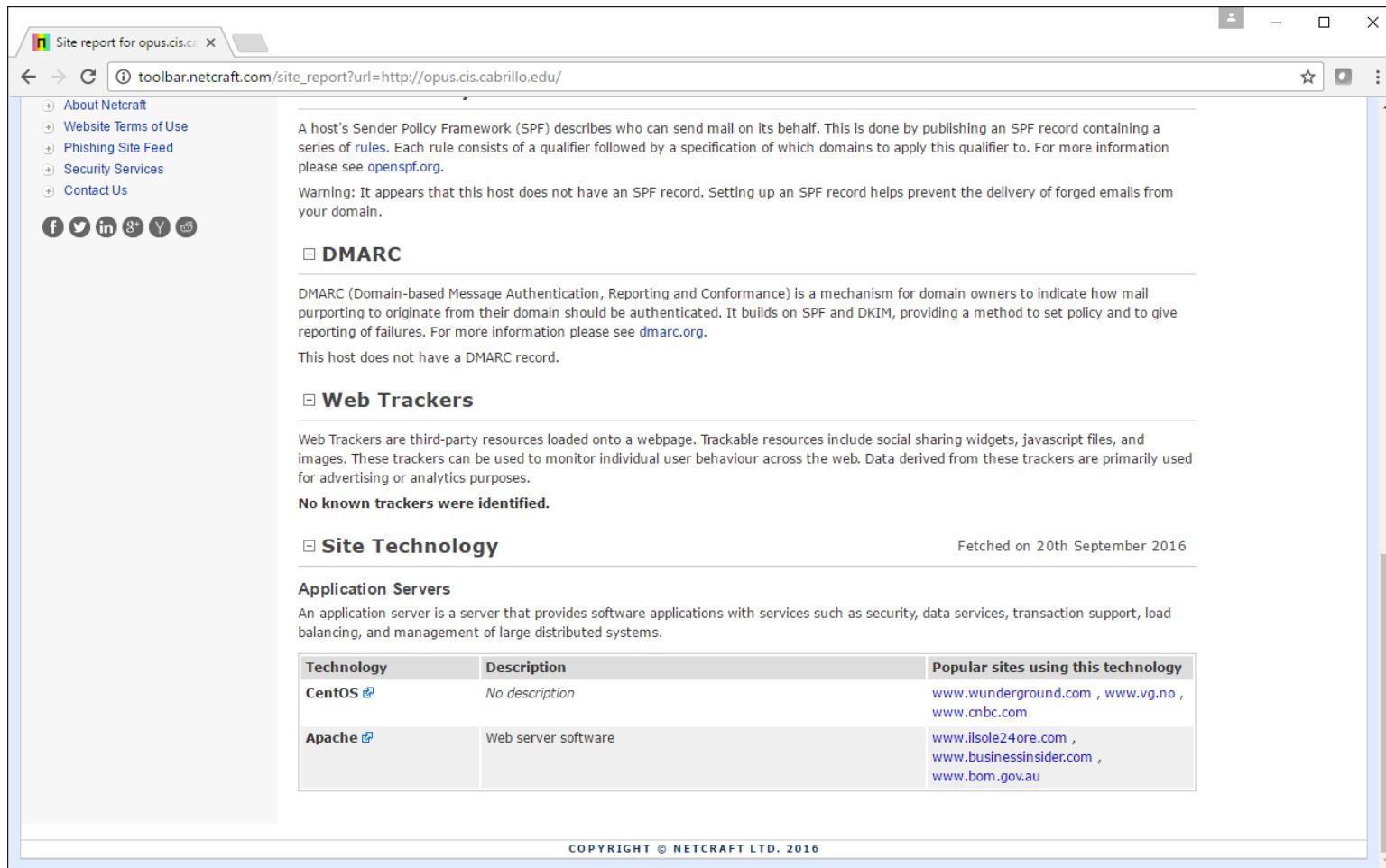
DMARC (Domain-based Message Authentication, Reporting and Conformance) is a mechanism for domain owners to indicate how mail purporting to originate from their domain should be authenticated. It builds on SPF and DKIM, providing a method to set policy and to give reporting of failures. For more information please see [dmarc.org](http://dmarc.org).

This host does not have a DMARC record.

**Web Trackers:**

Web Trackers are third-party resources loaded onto a webpage. Trackable resources include social sharing widgets, javascript files, and images. These trackers can be used to monitor individual user behaviour across the web. Data derived from these trackers are primarily used for advertising or analytics purposes.

# Netcraft



The screenshot shows a browser window displaying the Netcraft site report for the URL <http://opus.cis.cabrillo.edu/>. The page includes a sidebar with links to About Netcraft, Website Terms of Use, Phishing Site Feed, Security Services, and Contact Us, along with social sharing icons for Facebook, Twitter, LinkedIn, Google+, YouTube, and Email.

**DMARC**

A host's Sender Policy Framework (SPF) describes who can send mail on its behalf. This is done by publishing an SPF record containing a series of rules. Each rule consists of a qualifier followed by a specification of which domains to apply this qualifier to. For more information please see [openspf.org](https://openspf.org).

Warning: It appears that this host does not have an SPF record. Setting up an SPF record helps prevent the delivery of forged emails from your domain.

**Web Trackers**

Web Trackers are third-party resources loaded onto a webpage. Trackable resources include social sharing widgets, javascript files, and images. These trackers can be used to monitor individual user behaviour across the web. Data derived from these trackers are primarily used for advertising or analytics purposes.

No known trackers were identified.

**Site Technology**

Fetched on 20th September 2016

**Application Servers**

An application server is a server that provides software applications with services such as security, data services, transaction support, load balancing, and management of large distributed systems.

Technology	Description	Popular sites using this technology
CentOS	No description	<a href="http://www.wunderground.com">www.wunderground.com</a> , <a href="http://www.vg.no">www.vg.no</a> , <a href="http://www.cnbc.com">www.cnbc.com</a>
Apache	Web server software	<a href="http://www.ilsole24ore.com">www.ilsole24ore.com</a> , <a href="http://www.businessinsider.com">www.businessinsider.com</a> , <a href="http://www.bom.gov.au">www.bom.gov.au</a>

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# Light probing with telnet

# telnet command

```
root@eh-kali-05: ~
```

TELNET(1) BSD General Commands Manual TELNET(1)

**NAME**  
telnet - user interface to the TELNET protocol

**SYNOPSIS**  
telnet [-468ELaddr] [-S tos] [-b address] [-e escapechar] [-l user] [-n tracefile] [host [port]]

**DESCRIPTION**  
The telnet command is used for interactive communication with another host using the TELNET protocol. It begins in command mode, where it prints a telnet prompt ("telnet>"). If telnet is invoked with a host argument, it performs an open command implicitly; see the description below.

**Options:**

- 4 Force IPv4 address resolution.
- 6 Force IPv6 address resolution.
- 8 Request 8-bit operation. This causes an attempt to negotiate the TELNET BINARY option for both input and output. By default telnet is not 8-bit clean.
- E Disables the escape character functionality; that is, sets the escape character to ``no character''.
- L Specifies an 8-bit data path on output. This causes the TELNET BINARY option to be negotiated on just output.
- a Attempt automatic login. Currently, this sends the user name via the USER

Manual page telnet(1) line 1 (press h for help or q to quit)

# netcat

```
root@eh-kali-05: ~
NC(1)                               General Commands Manual      NC(1)

NAME
    nc - TCP/IP swiss army knife

SYNOPSIS
    nc [-options] hostname port[s] [ports] ...
    nc -l -p port [-options] [hostname] [port]

DESCRIPTION
    netcat is a simple unix utility which reads and writes data across network connections, using TCP or UDP protocol. It is designed to be a reliable "back-end" tool that can be used directly or easily driven by other programs and scripts. At the same time, it is a feature-rich network debugging and exploration tool, since it can create almost any kind of connection you would need and has several interesting built-in capabilities. Netcat, or "nc" as the actual program is named, should have been supplied long ago as another one of those cryptic but standard Unix tools.

    In the simplest usage, "nc host port" creates a TCP connection to the given port on the given target host. Your standard input is then sent to the host, and anything that comes back across the connection is sent to your standard output. This continues indefinitely, until the network side of the connection shuts down. Note that this behavior is different from most other applications which shut everything down and exit after an end-of-file on the standard input.

    Netcat can also function as a server, by listening for inbound connections on arbitrary ports and then doing the same reading and writing. With minor limitations, netcat doesn't really care if it runs in "client" or "server" mode -- it still shovels data back and forth until there isn't any more left. In either mode, shutdown can be forced after a configurable time of inactivity on the network side.

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 -v** <host-or-IP-addess> <port>

# Probing simms-teach.com

**telnet simms-teach.com 80**

```
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

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:~#
```

**nc -v simms-teach.com 80**

# Probing eh-centos VM

**telnet eh-centos 80****nc -v eh-centos 80**

```
root@eh-kali-05:~# telnet eh-centos 80
Trying 172.30.10.160...
Connected to eh-centos.cis.cabrillo.edu.
Escape character is '^]'.
HEAD / HTTP/1.0

HTTP/1.1 200 OK
Date: Tue, 20 Sep 2016 05:55:00 GMT
Server: Apache/2.2.15 (CentOS)
Last-Modified: Fri, 02 Sep 2016 19:20:24 GMT
ETag: "22044-9c-53b8b38e1949a"
Accept-Ranges: bytes
Content-Length: 156
Connection: close
Content-Type: text/html; charset=UTF-8

Connection closed by foreign host.
root@eh-kali-05:~#
```

*We know it is an Apache web server version 2.2.15 on CentOS*

# Probing OWASP VM

**telnet 10.76.5.101 80****nc -v 10.76.5.101 80**

```
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 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

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*

## Activity

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

What web server software and version is running there?

*Put your answer in the chat window*

# Using telnet for port 25 (SMTP)

## Some SMTP commands

HELO <*sending-hostname*>

*Initiate SMTP conversation*

EHLO <*sending-hostname*>

*Initiate extended SMTP conversation*

MAIL From: <*source email address*>

*Source*

RCPT To: <*destination email address*>

*Destination*

DATA

*Message body*

QUIT

*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: queued 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*

# 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)

*Job title: System Administrator***Typical Qualifications:**

Any combination of education, training and or/experience which substantially demonstrates the following knowledge, skills and abilities:

Thorough knowledge of:

1. Cisco routing and switching
2. Windows 2008/2012 Server
3. Microsoft Exchange
4. Windows Software Update Services (WSUS)
5. Microsoft Internet Information Services (IIS)
6. Microsoft SQL Server
7. VMware virtualization (Server and desktop)
8. Nimble iSCSI SANs
9. Veeam Backup and Recovery
10. ShoreTel VoIP phone system
11. Desktop and server system deployment
12. Principles, practices, and techniques,

1. Subject matter expert on datacenter and computer systems (servers, desktops, VDI, routers, switches), security, Court's critical systems
2. Resolve problems with a wide variety of computer equipment (PCs, servers, printers, SAN, NAS, etc.)
3. Perform project management including scheduling, developing critical paths, tracking, contingency planning, resource allocation, and team leadership
4. Communicate effectively with all levels of management
5. Be flexible and adaptable to continually changing demands or situations
6. Prepare clear, concise, and accurate documentation
7. Build effective work teams
8. Establish and maintain effective working relationships
9. Be a strong team player with excellent customer service skills

<http://www.indeed.com/>

**Highly Desired:**

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

## Activity

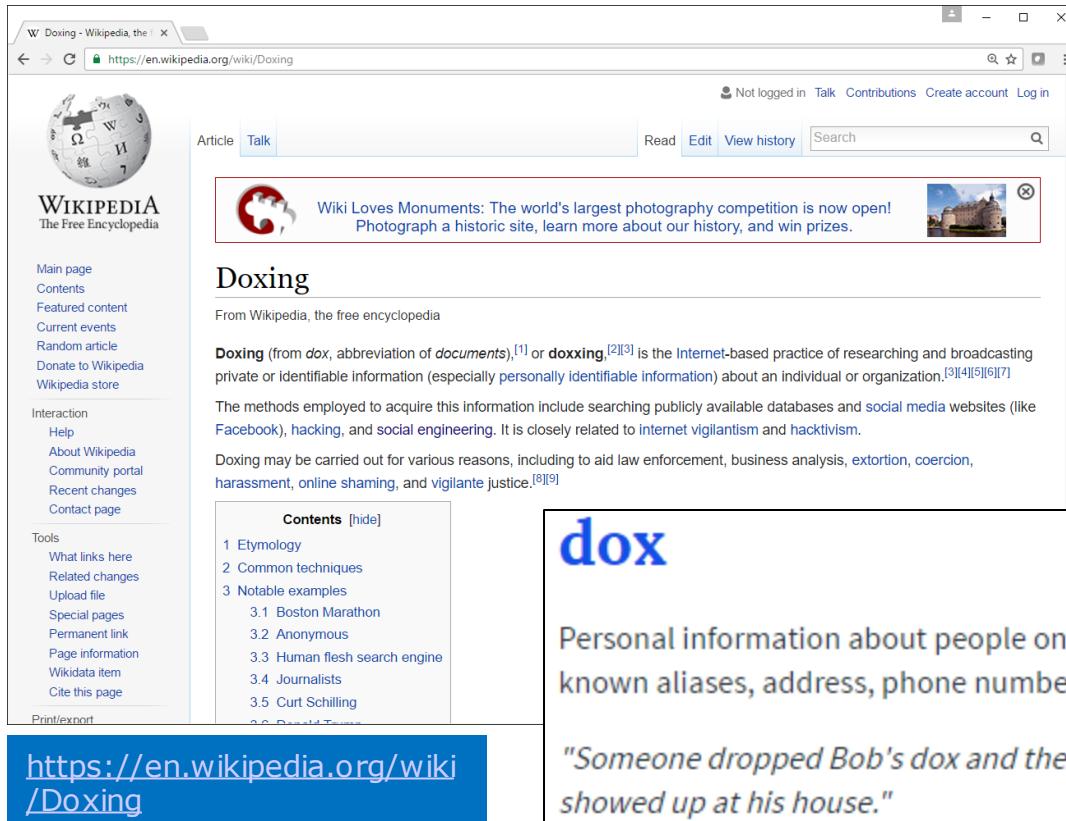
Browse the technical job listings on monster.com or indeed.com.

Did you find any specific system or network information?

*If so put what you found in the chat window*

# doxing and pipelining

# Doxing



The screenshot shows a computer browser displaying the Wikipedia page for "Doxing". The page title is "Doxing" and it is categorized under "Technology". The content discusses the practice of doxing, which involves collecting and publishing private or identifiable information about individuals or organizations. It includes sections on etymology, common techniques, and notable examples. A sidebar on the left provides navigation links for the Wikipedia site, and a footer at the bottom contains the URL <https://en.wikipedia.org/wiki/Doxing>.

# dox

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

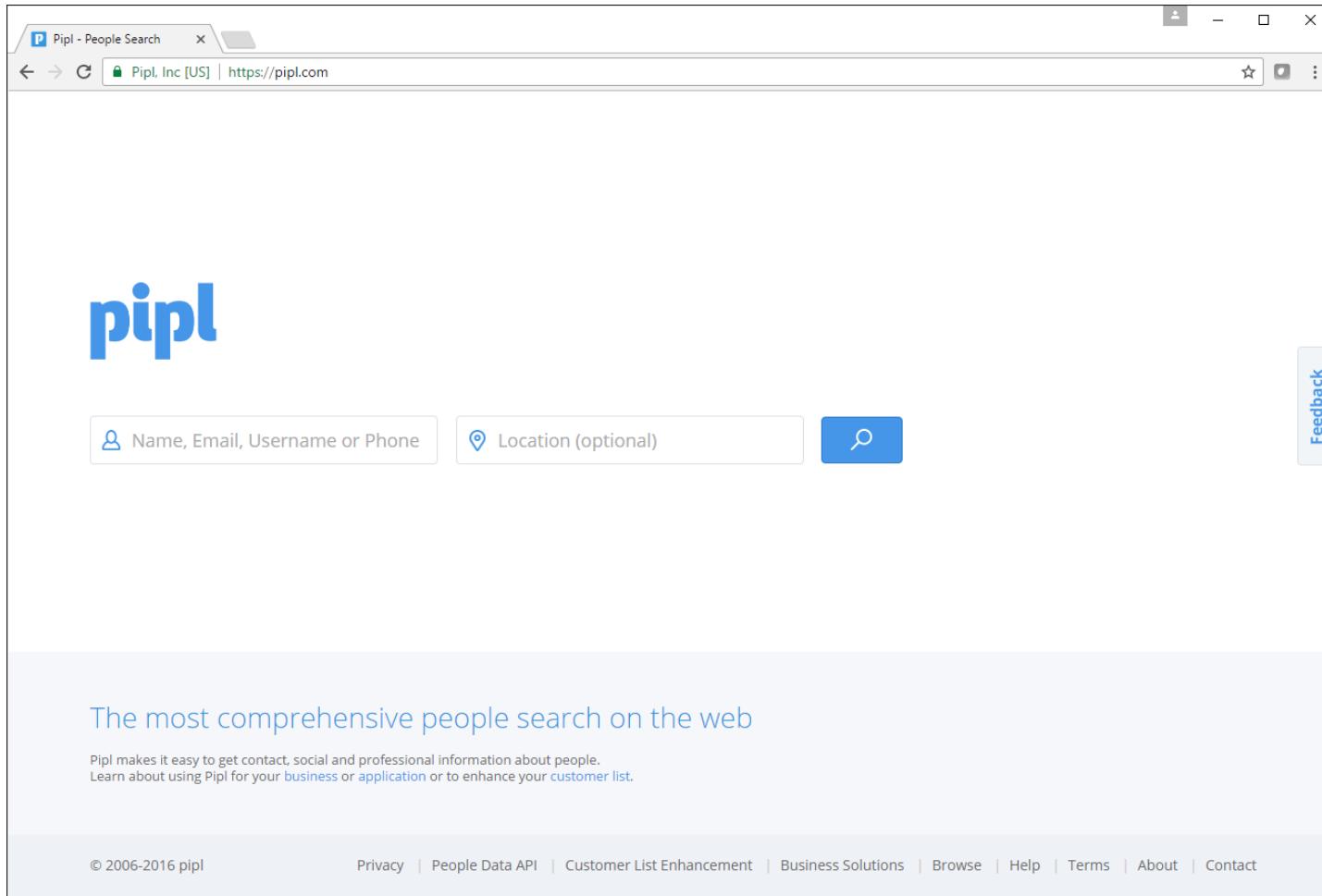
*"Someone dropped Bob's dox and the next day, ten pizzas and three tow trucks showed up at his house."*

#lulz #owned #hacker #social engineering #ruin

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

*Creating a "dossier" on someone or an organization*

## pipl



The screenshot shows a web browser window for the Pipl People Search website. The address bar displays "Pipl - People Search" and the URL "Pipl, Inc [US] | https://pipl.com". The main page features the Pipl logo at the top left. Below it are two input fields: one for "Name, Email, Username or Phone" and another for "Location (optional)". To the right of these fields is a blue search button with a magnifying glass icon. A vertical "Feedback" button is located on the far right. A large, light gray banner below the search form contains the text "The most comprehensive people search on the web" in blue. Underneath the banner, smaller text reads: "Pipl makes it easy to get contact, social and professional information about people. Learn about using Pipl for your [business](#) or [application](#) or to enhance your [customer list](#)." At the bottom of the page, a footer bar includes links for "Privacy", "People Data API", "Customer List Enhancement", "Business Solutions", "Browse", "Help", "Terms", "About", and "Contact".

*Lookup information on people*

## Activity

pipl yourself to see how effective this web site is.

Did it find more about you than you expected?

*Write your answer in the chat window*

# Website Information

## firebug

# Web Data Extractor



diggity

# Google Hacking

# Google Hacking with AND (or space) operator

**petunias AND daffodils**

petunias AND daffodils

About 436,000 results (0.46 seconds)

**Images for petunias AND daffodils**

Report images

More images for petunias AND daffodils

**Why you should combine daffodils with petunias**  
[bradtropicalparadise.blogspot.com/.../why-you-should-combine-daffodil...](http://bradtropicalparadise.blogspot.com/.../why-you-should-combine-daffodil...)  
 Nov 10, 2015 - I've had **daffodils** here in the Tropical Paradise for years and years. In this mild climate, all you gotta do is plant them once, and they come back ...

**How to Landscape With Petunias | Home Guides | SF Gate**  
[homeguides.sfgate.com/garden/landscaping...](http://homeguides.sfgate.com/garden/landscaping...)  
 Grow **petunias** in front of or among spring bulbs, such as tulips or **daffodils**. Plant them after removing faded spring blooms. The **petunias** will keep bulb beds ...

**Wishbone | Petunias or daffodils? : Created by the\_tiny\_tardigrade**  
[wishbone.io/petunias-or-daffodils-36235920.html](http://wishbone.io/petunias-or-daffodils-36235920.html)  
 Vote on "Petunias or daffodils?" (by the\_tiny\_tardigrade) and other celebs, trends and

*Finds pages containing both  
petunias and roses.*

**petunias daffodils**

About 1,660,000 results (0.45 seconds)

**Images for petunias daffodils**

Report images

More images for petunias daffodils

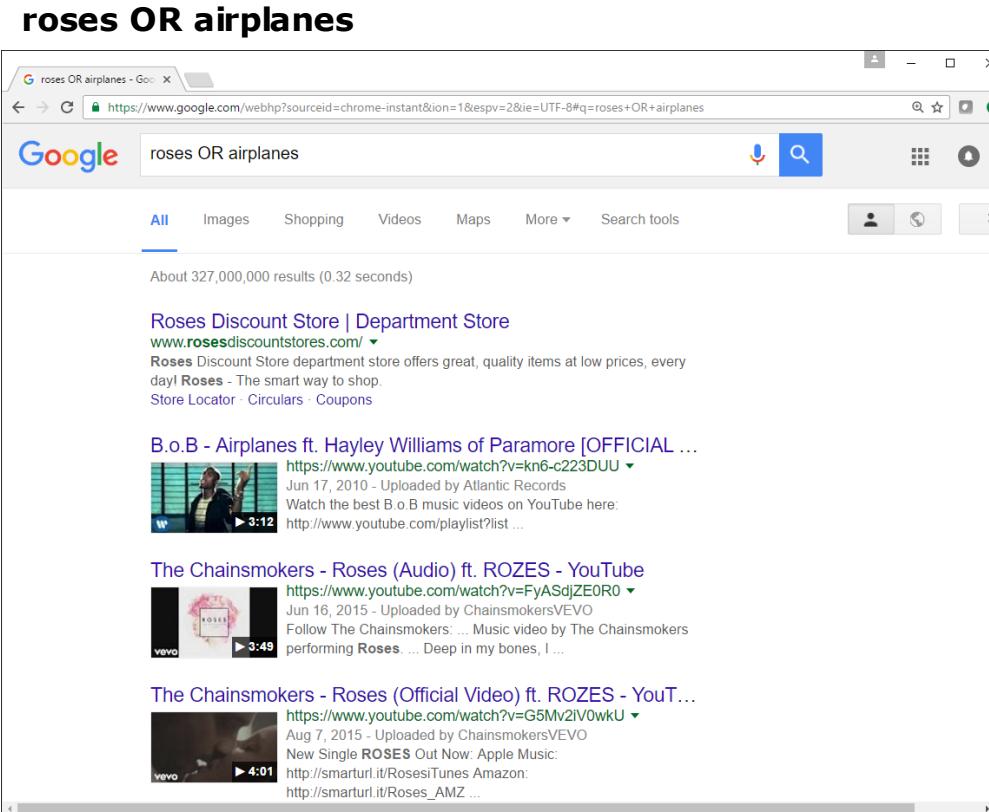
**Flowers on Pinterest | Petunias, Daffodils and Backyards**  
<https://www.pinterest.com/blancaarcher/flowers/>  
 Explore Bianca Starcher's board "Flowers" on Pinterest, a visual bookmarking tool that helps you discover and save creative ideas | See more about **Petunias**, ...

**TULIPS, ROSES, HYACINTHES, PETUNIAS, DAFFODILS, A...**  
[www.artnet.com/.../tulips-roses-hyacinthes-petunias-daffodils-aa-ip...](http://www.artnet.com/.../tulips-roses-hyacinthes-petunias-daffodils-aa-ip...) Artnet ▾  
 View TULIPS, ROSES, HYACINTHES, **PETUNIAS, DAFFODILS**, A SUNFLOWER AND OTHER FLOWERS IN A SCULPTED URN ON A LEDGE by Andrea ...

**Why you should combine daffodils with petunias**  
[bradtropicalparadise.blogspot.com/.../why-you-should-combine-daffodil...](http://bradtropicalparadise.blogspot.com/.../why-you-should-combine-daffodil...)  
 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**



The screenshot shows a Google search results page with the query "roses OR airplanes" entered in the search bar. The results are filtered under the "All" category. The first result is a link to "Roses Discount Store | Department Store" with a snippet about quality items at low prices. The second result is a YouTube video thumbnail for "B.o.B - Airplanes ft. Hayley Williams of Paramore [OFFICIAL...]" with a duration of 3:12. The third result is a YouTube video thumbnail for "The Chainsmokers - Roses (Audio) ft. ROZES - YouTube" with a duration of 3:49. The fourth result is a YouTube video thumbnail for "The Chainsmokers - Roses (Official Video) ft. ROZES - YouTube..." with a duration of 4:01.

*Finds pages with roses or pages with airplanes.*

# Google Hacking with NOT (or -) operator

roses

**roses NOT red**

The first finds pages with all kinds of roses, the second weeds out red roses.

# Google Hacking with site: and filetype: operators

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

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

test firefox 3  
test 4  
**training level test 3**  
**aamc practice test 3**

About 294 results (0.37 seconds)

**Prep for Test #3**  
<https://simms-teach.com/2013-fall/.../cis-90-TEST-3-Fall-13-practice.pdf>  
 CIS 90 - Fall 2013 - PRACTICE TEST 3 - 30 points. Timed Test (2 hours 50 minutes). Honor Code: This is a practice test and you may work with others and use ...

**CIS 90 - Spring 2012 - PRACTICE TEST 3 - 30 points - Rich'**  
<https://simms-teach.com/2012.../cis-90-TEST-3-Spring-12-practice.pdf>  
 CIS 90 - Spring 2012 - PRACTICE TEST 3 - 30 points. Timed Test (2 hours 50 minutes). 10 questions. 1 extra credit question. Honor Code: This is a practice test ...  
 You've visited this page 3 times. Last visit: 9/17/16

**[PDF] Prep for Test #3**  
<https://simms-teach.com/2011.../cis-90-TEST-3-Spring-11-practice.pdf>  
 CIS 90 – Practice Test 3 – Spring 2011. 30 points + 10 points extra credit (each question worth 2 points). For this practice test you may work with others and use ...

**[PDF] CIS 90 - Fall 2012 - PRACTICE TEST 3 - 30 points Timed...**  
<https://simms-teach.com/docs/cis90/cis-90-TEST-3-Fall-12-practice.pdf>  
 answers. Your ptest03 file should look like: CIS 90 Test 3 (Practice). Name: your name here. Answer 1 your answer here. Answer 2 your answer here. Answer 3.  
 You've visited this page 2 times. Last visit: 9/17/16

**CIS 90 - Spring 2012 - TEST 3 - 30 points - Rich's Cabrillo Co...**  
<https://www.simms-teach.com/2012-spring/.../cis-90-TEST-3-Spring-12.pdf>

*Finds old tests on my website*

**CIS 90 - Fall 2013 - PRACTICE TEST 3 - 30 points**  
 Timed Test (2 hours 50 minutes)

**Honor Code:**  
 This is a practice test and you may work with others and use the forum. However on the real test you must work alone. This test is not turned in or graded.

**Procedure**  
 For this test you will use the **Sun-Hwa** Linux system.

Read and carry out in order each of the instructions below. You will be creating a directory and adding files and directories to it. If you can't complete a step you can ask the instructor for help and forfeit the points for that step.

**Note to Instructor:**  
 remove /etc/nologin  
 setup-romeo-juliet for P3 on sun-hwa

**Navigate and manage the UNIX/Linux file system**

- [2 points] In your home directory you will see a directory named **RJ-Tree**. Create a new directory named **ptest03** and move **RJ-Tree** into it. Set the permissions on **ptest03** to 700 and **RJ-Tree** to 550. Explore **RJ-Tree** so you have an idea of what's in it.
- [2 points] Use your original Opus credentials with **scp** to copy the remote file **ptest03.tar** from the **Razia** Linux system. This tarball file is located in the **/var/tests/P3** directory on **Razia**. Place this file, keeping the same name, into your **ptest03** directory on **Sun-Hwa**.
- [2 points] Extract all the files in **ptest03.tar** into your **ptest03** directory. Get rid of all the files whose names start with "junk". Change the permissions of the extracted **RJ-All-P3** and **index** files to 444. Explore both so you have an idea of what they contain.
- [2 points] A file containing the word "signal" has been hidden somewhere in your **RJ-Tree** directory. Locate this file and make a copy of it, named **segnole**, in your **ptest03** directory. Change the permissions on this file to 400.
- [4 points] On **Sun-Hwa** examine your **segnole** file and identify your unique signal number. Start the

# Google Hacking with site: and filetype: operators

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

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

About 112 results (0.30 seconds)

**CIS 90 - Fall 2013 - TEST 3 (Finnish) - 30 points**  
[simms-teach.com/2013-fall/docs/cis90/cis-90-TEST-3-Fall-13.pdf](https://simms-teach.com/2013-fall/docs/cis90/cis-90-TEST-3-Fall-13.pdf)  
 CIS 90 - Fall 2013 - **TEST 3** (Finnish) - 30 points. Timed Test (2 hours 50 minutes). Honor Code: This **test** is open book, open notes, and open computer.

**CIS 192 - Spring 2013 - TEST 3 - 30 points**  
<https://simms-teach.com/docs/cis192/cis192-TEST-3-sp13.pdf>  
 CIS 192 - Spring 2013 - **TEST 3** - 30 points. Honor Code: This **test** is open book, open notes, and open computer. **HOWEVER**, you must work alone. You may not ...

[PDF] **CIS 90 - Fall 2012 - TEST 2 - 30 points** Honor Code: This ...  
<https://simms-teach.com/2012-fall/docs/.../cis-90-TEST-2-Fall-12.pdf> ▾  
 This **test** is open book, open notes, and open computer. ... completed **test** to be graded! Everyone .... Part 3 – Use Opus for the following questions (1 point each).

**CIS 90 - Spring 2012 - TEST 2 - Rich's Cabrillo College CIS ...**  
<https://www.simms-teach.com/2012-spring/.../cis-90-TEST-2-Spring-12.pdf> ...  
 This **test** is open book, open notes, and open computer. **HOWEVER**, you ... Part 3 – Use Opus to verify your answers to the following questions (1 point each).

**CIS 90 - Rich's Cabrillo College CIS Classes**  
<https://www.simms-teach.com/2012-spring/docs/cis90/cis90lesson16.pdf>  
 Email me (risimms@cabrillo.edu) a relatively current photo of your face for 3 points ...

CIS 90 - Last Day Objectives Agenda • Last day of the course • Test #3

*Finds old tests on my website and doesn't include the practice ones*

**CIS 90 - Fall 2013 - TEST 3 (Finnish) - 30 points**  
 Timed Test (2 hours 50 minutes)  
**Honor Code:**  
 This test is open book, open notes, and open computer. **HOWEVER**, you must work alone. You may not share answers. You may not receive or give assistance to others.

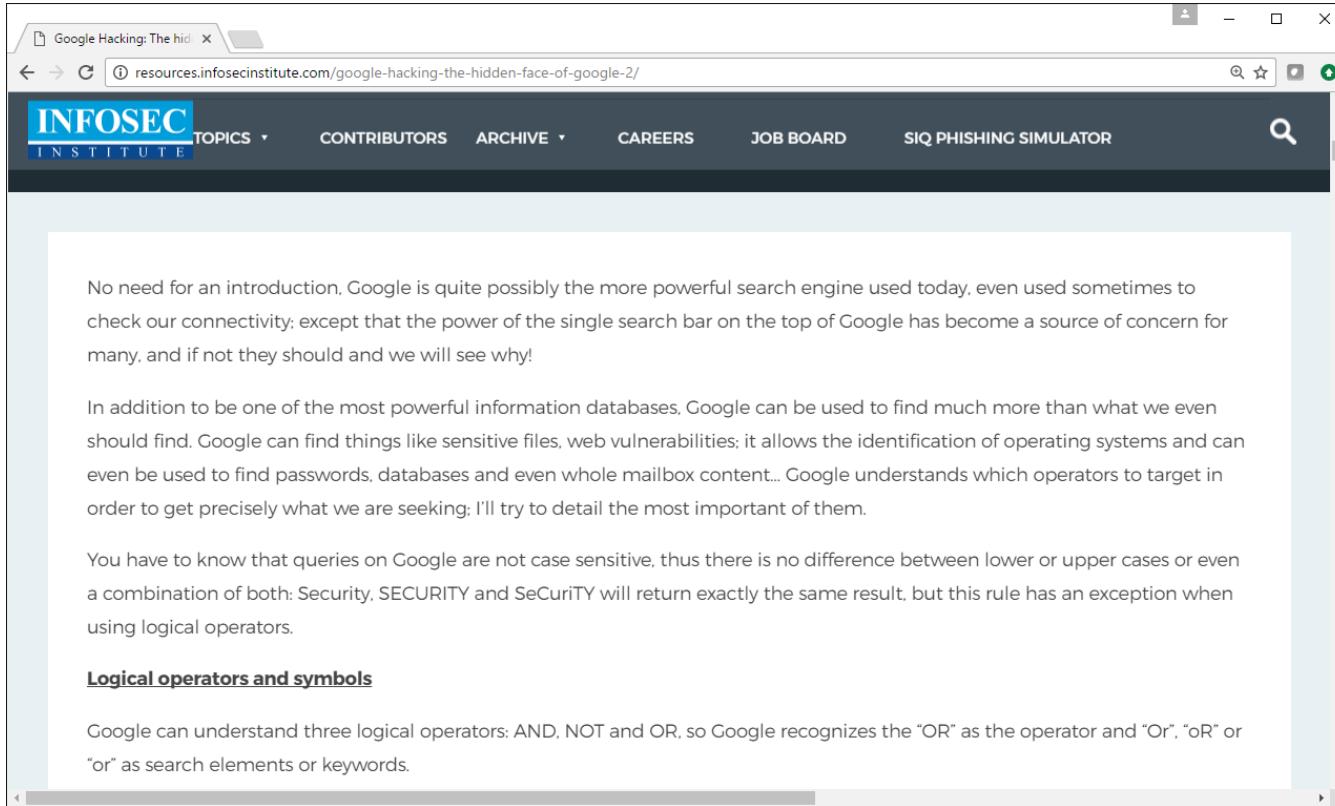
**Procedure:**  
 For this test you will use the **Sun-Hwa-II** Linux system. Read and carry out in order each of the instructions below. You will be creating a directory and adding files and directories to it. If you can't complete a step you can ask the instructor for help and forfeit the points for that step.

English	Finnish
signal	signaali
quote	lainaus
accounts	tilit
place	paikka
custom	nimikotu
lines	vuorosat
tally	pistelasku
reports	raportti

**Navigate and manage the UNIX/Linux file system**

- [2 points] In your home directory you will see a directory named **RJ-Tree**. Create a new directory named **test03** and move **RJ-Tree** into it. Set the permissions on **test03** to 700 and **RJ-Tree** to 755. Explore **RJ-Tree** so you have an idea of what's in it.
- [2 points] Use your original Opus credentials with **scp** to copy the remote file **test03.tar** from the **Catalina** Linux system. This tarball file is located in your home directory on **Catalina**. Place this file, keeping the same name, into your **test03** directory on **Sun-Hwa-II**.
- [2 points] Extract all the files in **test03.tar** into your **test03** directory. Get rid of all the files whose names start with "borsou". Change the permissions of the extracted **RJ-All-T3** and **index** files to 440. Explore both so you have an idea of what they contain.
- [2 points] A file containing the word "signal" has been hidden somewhere in your **RJ-Tree** directory.

# Google Hacking: The hidden face of Google

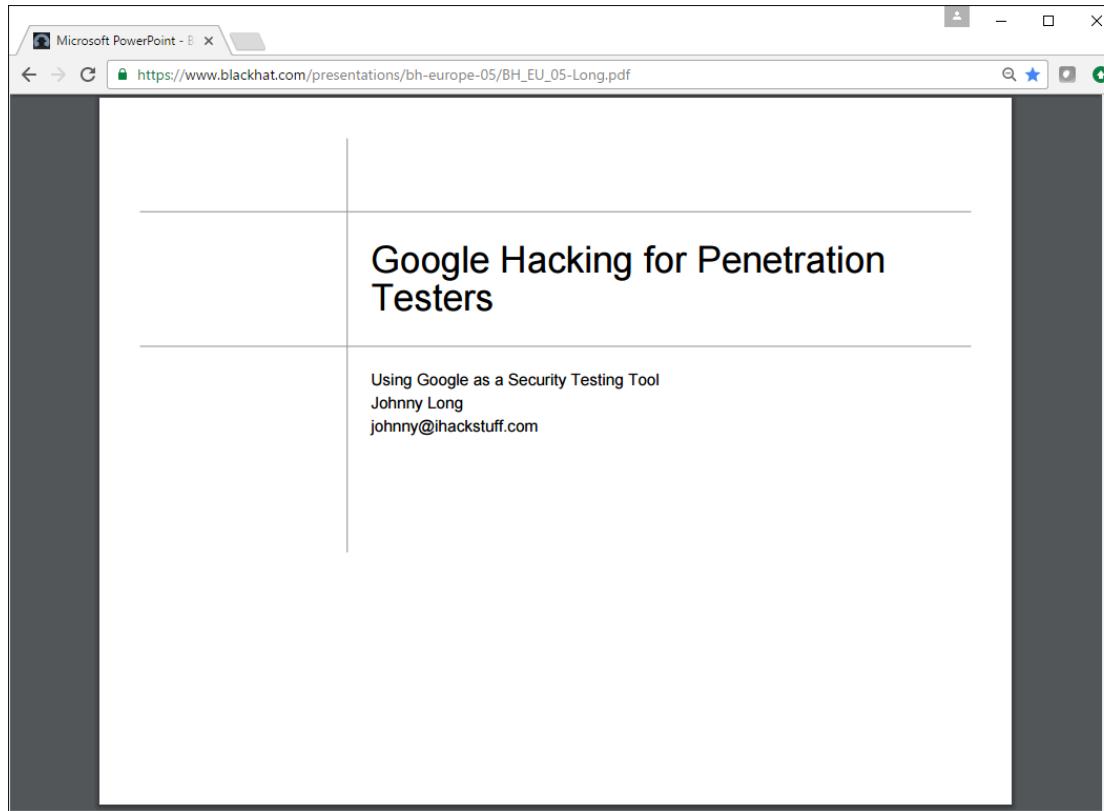


The screenshot shows a web browser window with the following details:

- Title Bar:** Google Hacking: The hid
- Address Bar:** resources.infosecinstitute.com/google-hacking-the-hidden-face-of-google-2/
- Page Content:**
  - Header:** INFOSEC INSTITUTE TOPICS ▾, CONTRIBUTORS, ARCHIVE ▾, CAREERS, JOB BOARD, SIQ PHISHING SIMULATOR, Search icon.
  - Text:** 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 for many, and if not they should and we will see why!
  - Text:** In addition to be one of the most powerful information databases, Google can be used to find much more than what we even should find. Google can find things like sensitive files, web vulnerabilities; it allows the identification of operating systems and can even be used to find passwords, databases and even whole mailbox content... Google understands which operators to target in order to get precisely what we are seeking; I'll try to detail the most important of them.
  - Text:** You have to know that queries on Google are not case sensitive, thus there is no difference between lower or upper cases or even a combination of both: Security, SECURITY and SeCuriTY will return exactly the same result, but this rule has an exception when using logical operators.
  - Section Header:** **Logical operators and symbols**
  - Text:** 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.

<http://resources.infosecinstitute.com/google-hacking-the-hidden-face-of-google-2/>

# Google Hacking by Johnny Long



## Advanced Operators at a Glance

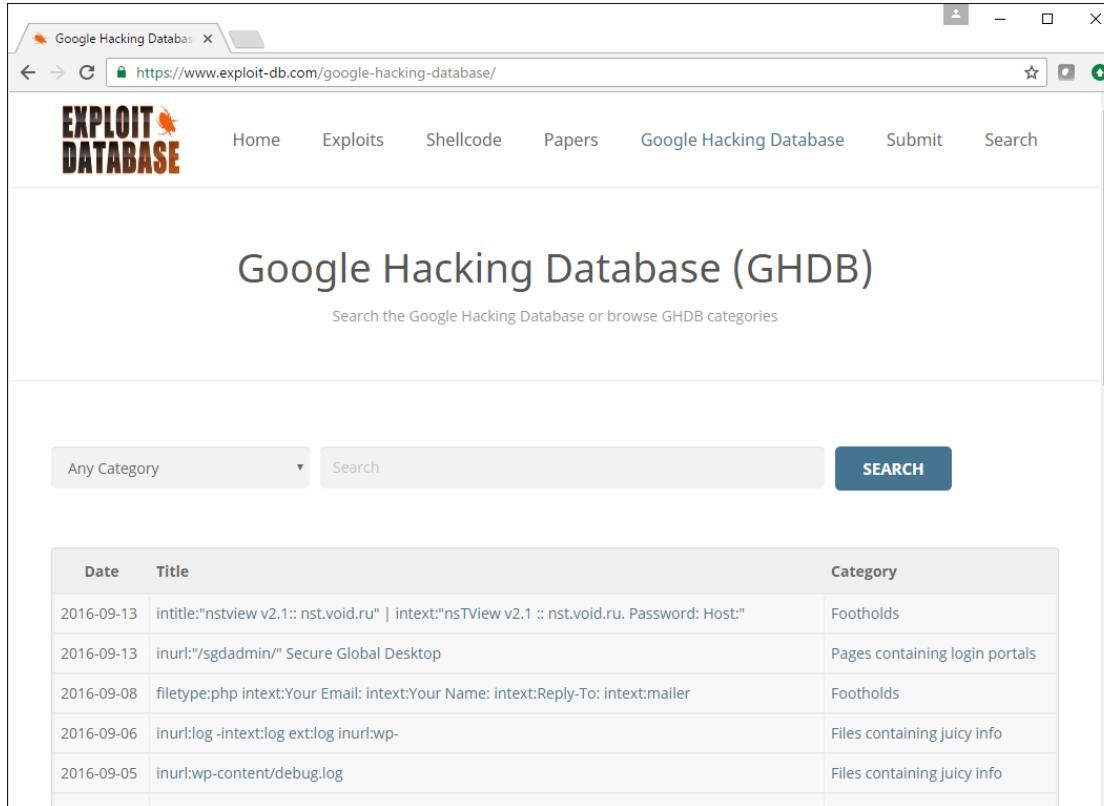
Advanced operators can be combined in some cases.

In other cases, mixing should be avoided.

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

Operator	Purpose	Mixes with other operators?	Can be used alone?	Does search work in			
				Web	Images	Groups	News
intitle	Search page title	yes	yes	yes	yes	yes	yes
allintitle	Search page title	no	yes	yes	yes	yes	yes
inurl	Search URL	yes	yes	yes	yes	not really	like intitle
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
link	Search for links to pages	no	yes	yes	no	no	not really
inanchor	Search link anchor text	yes	yes	yes	yes	not really	yes
numrange	Locate number	yes	yes	yes	no	no	not really
daterange	Search in date range	yes	no	yes	not really	not really	not really
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

# Google Hacking On Exploit Database



The screenshot shows a web browser window displaying the Google Hacking Database (GHDB) at <https://www.exploit-db.com/google-hacking-database/>. The page features a navigation menu with links for Home, Exploits, Shellcode, Papers, Google Hacking Database, Submit, and Search. The main content area is titled "Google Hacking Database (GHDB)" and includes a search bar and a dropdown menu for selecting a category. Below these are several search results listed in a table format.

Date	Title	Category
2016-09-13	intitle:"nstview v2.1:: nst.void.ru"   intext:"nsTView v2.1 :: nst.void.ru. Password: Host:"	Footholds
2016-09-13	inurl:"sgdadmin/" Secure Global Desktop	Pages containing login portals
2016-09-08	filetype:php intext:Your Email: intext:Your Name: intext:Reply-To: intext:mailer	Footholds
2016-09-06	inurl:log -intext:log ext:log inurl:wp-	Files containing juicy info
2016-09-05	inurl:wp-content/debug.log	Files containing juicy info

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

# Google Hacking Database Activity

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

Break-out rooms for the following GHDB categories:

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

Instructions: Introduce yourself to the others in your online break-out room. Divvy up some of the Google searches in your categories to find 1 - 3 interesting sites to share with the class. Only select sites that are "appropriate" to share in a college class environment.

Each group will present the tops 1-3 sites they found

# Social Engineering

# 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 **marks**) 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.*

<http://www.urbandictionary.com/define.php?term=con%20man%20>

## Social Engineering

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.

## Social Engineering

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)



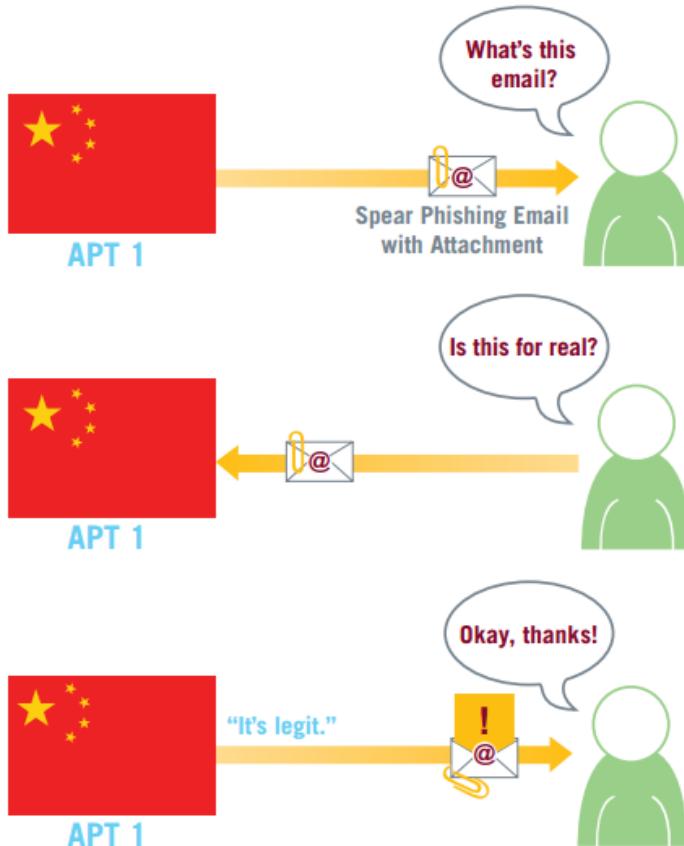
# Social Engineering

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

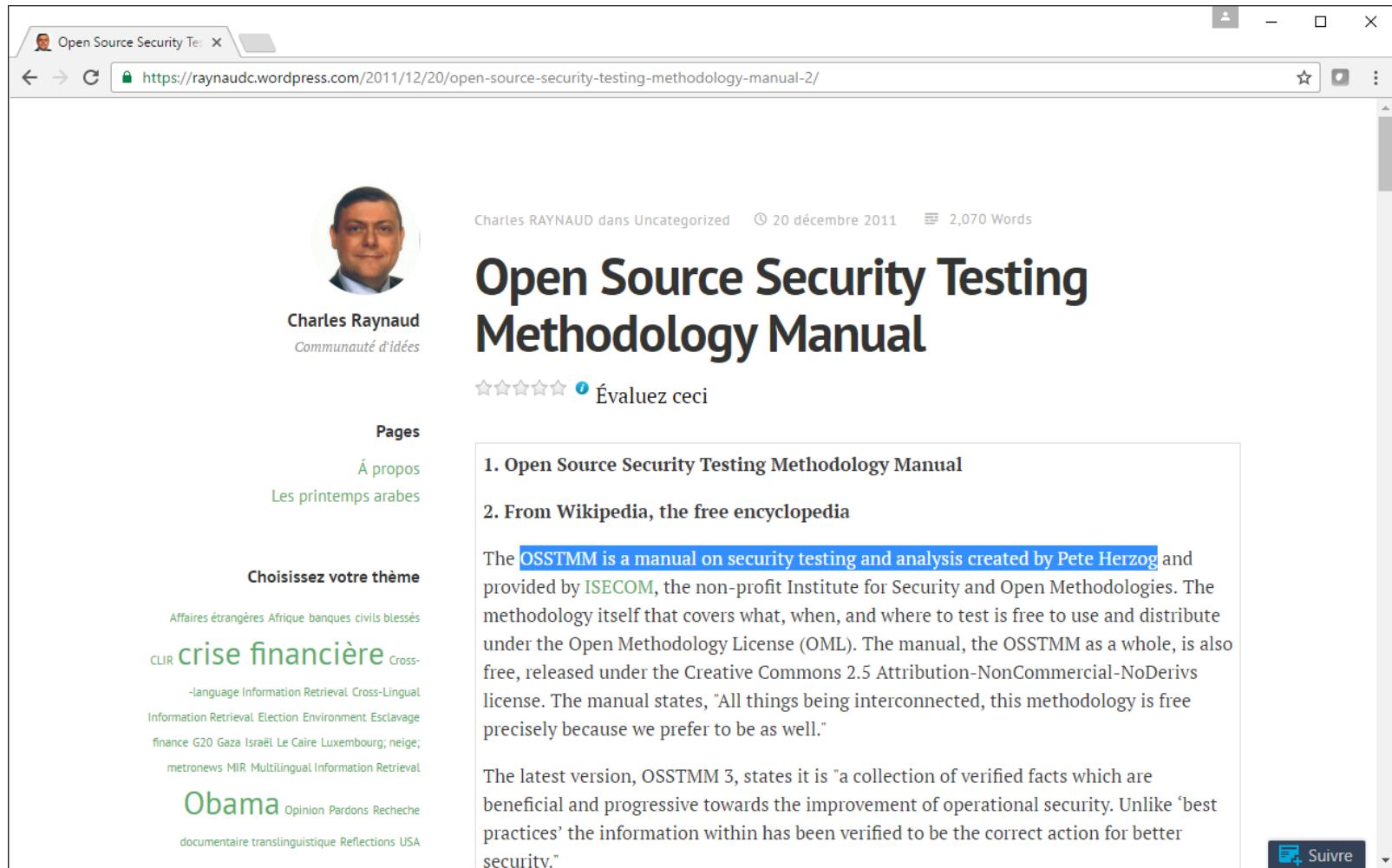
# Social Engineering

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



The screenshot shows a WordPress blog post. At the top, there's a header bar with a user icon, a minimize button, a maximize button, and a close button. Below the header is a navigation bar with back, forward, and search icons, followed by the URL <https://raynaudc.wordpress.com/2011/12/20/open-source-security-testing-methodology-manual-2/>. The main content area features a profile picture of Charles Raynaud, his name, and his affiliation with "Communauté d'idées". To the right of the profile picture are the author's name (Charles RAYNAUD), category (Uncategorized), date (20 décembre 2011), and word count (2,070 Words). The title of the post is "Open Source Security Testing Methodology Manual", displayed in a large, bold, dark font. Below the title is a rating section with five stars and a link to "Évaluez ceci". The post content is organized into two sections: "1. Open Source Security Testing Methodology Manual" and "2. From Wikipedia, the free encyclopedia". The first section contains a detailed description of the OSSTMM manual, mentioning its creation by Pete Herzog, its availability under the Open Methodology License, and its release under the Creative Commons 2.5 Attribution-NonCommercial-NoDerivs license. The second section provides a brief summary of the latest version, OSSTMM 3, stating it is a collection of verified facts beneficial for operational security. At the bottom right of the post area is a "Suivre" button with a small icon.

Charles RAYNAUD dans Uncategorized 20 décembre 2011 2,070 Words

# Open Source Security Testing Methodology Manual

★★★★★ [Évaluez ceci](#)

**1. Open Source Security Testing Methodology Manual**

**2. From Wikipedia, the free encyclopedia**

The OSSTMM is a manual on security testing and analysis created by Pete Herzog and provided by ISECOM, the non-profit Institute for Security and Open Methodologies. The methodology itself that covers what, when, and where to test is free to use and distribute under the Open Methodology License (OML). The manual, the OSSTMM as a whole, is also free, released under the Creative Commons 2.5 Attribution-NonCommercial-NoDerivs license. The manual states, "All things being interconnected, this methodology is free precisely because we prefer to be as well."

The latest version, OSSTMM 3, states it is "a collection of verified facts which are beneficial and progressive towards the improvement of operational security. Unlike 'best practices' the information within has been verified to be the correct action for better security."

[Suivre](#)



# Open-Source Security Testing Methodology Manual

## Rules of Engagement

...

### 3. Contracts and Negotiations

...

#### 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.

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

# Open-Source Security Testing Methodology Manual

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



## Social Engineering Target Template

## Target Definition

# Open-Source Security Testing Methodology Manual

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



## Social Engineering Telephone Attack Template

Attack Scenario	
Telephone #	
Person	
Description	
Results	

Attack Scenario	
Telephone #	
Person	
Description	
Results	

# Open-Source Security Testing Methodology Manual

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



## Social Engineering E-mail Attack Template

Attack Scenario	
Email	
Person	
Description	
Results	

Attack Scenario	
Email	
Person	
Description	
Results	

# Open-Source Security Testing Methodology Manual

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



## 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

DEF CON 23 - Social Engineering Village - Dave Kennedy - Understanding End-User Attacks

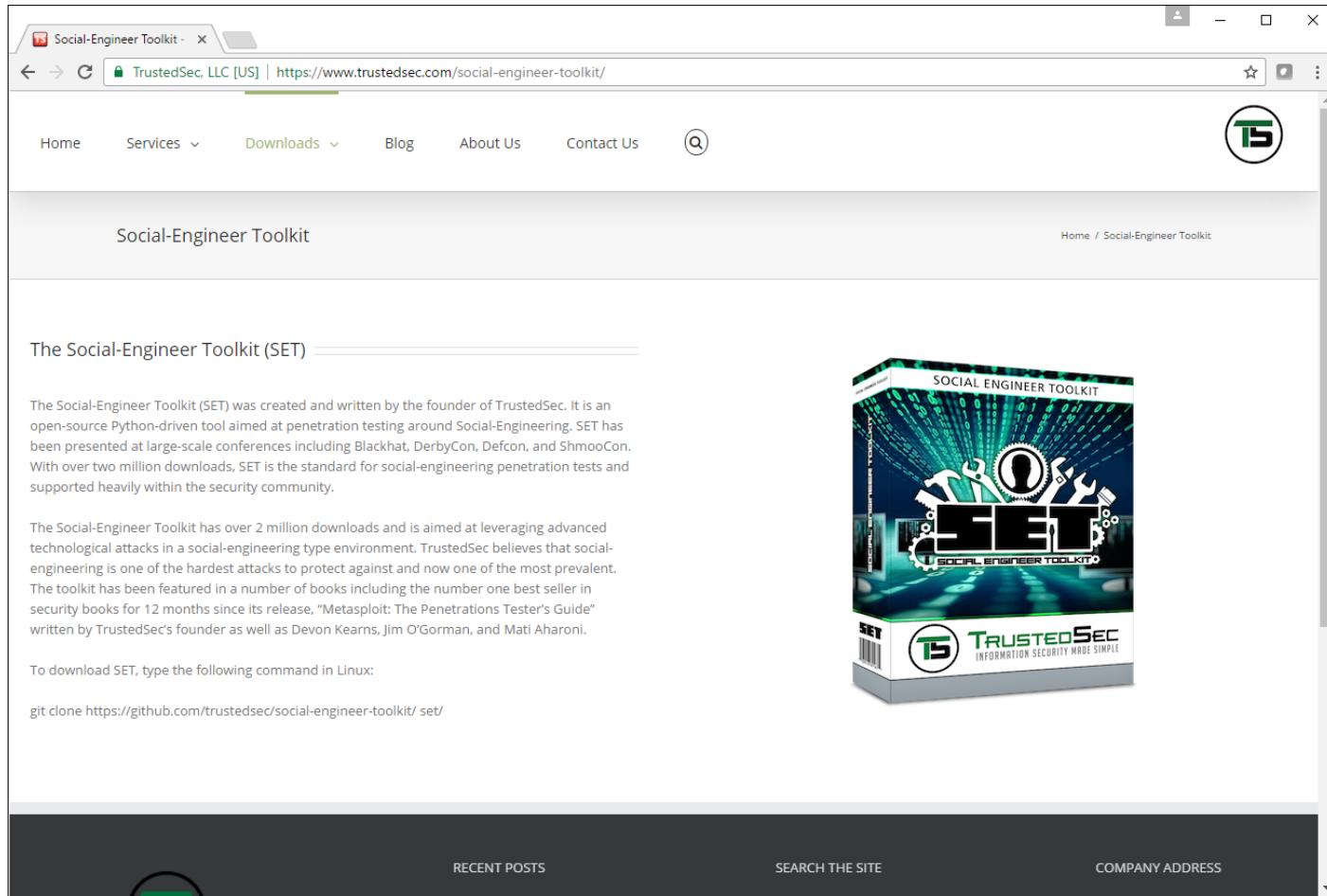
The image shows a video player interface. On the left, a white slide with a black border contains the title "Attacking Humans" in large, bold, black font. Below the title is a detailed anatomical illustration of a human muscular system, showing the muscles of the torso, arms, and legs. To the left of the slide is a bulleted list of reasons why humans are easy targets:

- Humans are the easiest route in, still...
- Surpassed direct compromises from the perimeter.
- Low investment, high return.
- Easy to go after an organization and create a fantasy to compromise an organization.

At the bottom of the slide, there are logos for "TRUSTED SEC" and "BDS BINARY DEFENSE SYSTEMS". The video player interface includes a progress bar showing 3:44 / 51:16, and standard video control icons (play, pause, volume, etc.). On the right side of the image, a video frame shows a man, identified as Dave Kennedy, standing on a stage and speaking. Behind him is a large screen displaying the text "Social-Engineer Village" and the DEF CON 23 logo. The overall theme is social engineering and cybersecurity.

*David Kennedy created the Social Engineering Toolkit (SET)*

# Social Engineering Toolkit



The screenshot shows a web browser window displaying the TrustedSec website at <https://www.trustedsec.com/social-engineer-toolkit/>. The page title is "Social-Engineer Toolkit". The main content area features a section about the Social-Engineer Toolkit (SET), its history, and its capabilities. It includes a command-line download instruction and a GitHub link. To the right of the text is a physical product image of the "SOCIAL ENGINEER TOOLKIT" box, which is green and black with the "SET" logo and "SOCIAL ENGINEER TOOLKIT" text. The box also features the TrustedSec logo and the tagline "INFORMATION SECURITY MADE SIMPLE". At the bottom of the page are links for "RECENT POSTS", "SEARCH THE SITE", and "COMPANY ADDRESS".

The Social-Engineer Toolkit (SET) was created and written by the founder of TrustedSec. It is an open-source Python-driven tool aimed at penetration testing around Social-Engineering. SET has been presented at large-scale conferences including Blackhat, DerbyCon, Defcon, and ShmooCon. With over two million downloads, SET is the standard for social-engineering penetration tests and supported heavily within the security community.

The Social-Engineer Toolkit has over 2 million downloads and is aimed at leveraging advanced technological attacks in a social-engineering type environment. TrustedSec believes that social-engineering is one of the hardest attacks to protect against and now one of the most prevalent. The toolkit has been featured in a number of books including the number one best seller in security books for 12 months since its release, "Metasploit: The Penetration Tester's Guide" written by TrustedSec's founder as well as Devon Kearns, Jim O'Gorman, and Mati Aharoni.

To download SET, type the following command in Linux:

```
git clone https://github.com/trustedsec/social-engineer-toolkit/ set/
```

*David Kennedy created the Social Engineering Toolkit (SET)*

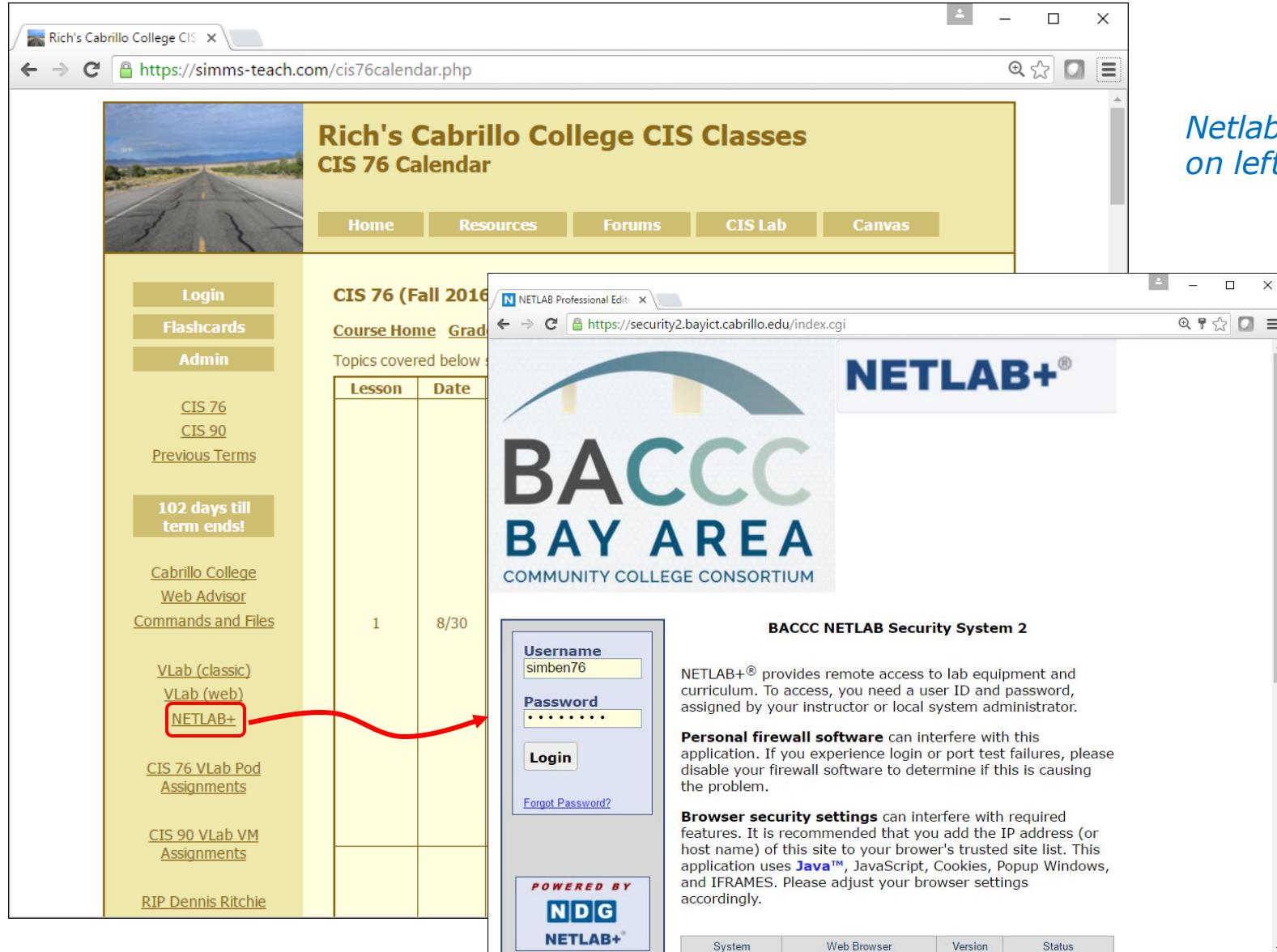
## Netlab+ Activity

*NDG EH Lab 2*

*Social Engineering Toolkit*

# Assignment



Rich's Cabrillo College CIS 

https://simms-teach.com/cis76calendar.php

**Rich's Cabrillo College CIS Classes**  
**CIS 76 Calendar**

**Home** **Resources** **Forums** **CIS Lab** **Canvas**

**CIS 76 (Fall 2016)**

[Course Home](#) [Grad](#)

Topics covered below:

Lesson	Date
1	8/30

**NETLAB+**

**BACCC BAY AREA**  
COMMUNITY COLLEGE CONSORTIUM

**BACCC NETLAB Security System 2**

NETLAB+® provides remote access to lab equipment and curriculum. To access, you need a user ID and password, assigned by your instructor or local system administrator.

**Personal firewall software** can interfere with this application. If you experience login or port test failures, please disable your firewall software to determine if this is causing the problem.

**Browser security settings** can interfere with required features. It is recommended that you add the IP address (or host name) of this site to your browser's trusted site list. This application uses Java™, JavaScript, Cookies, Popup Windows, and IFRAMES. Please adjust your browser settings accordingly.

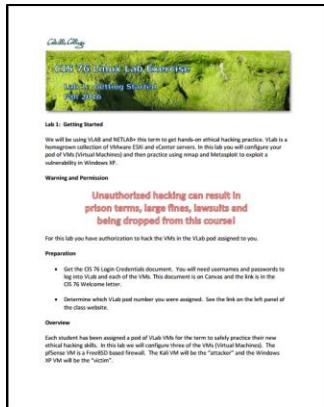
System Web Browser Version Status

*Netlab+ link  
on left panel*

# 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.



A photograph of a sunset over a beach. The sky is filled with vibrant orange, red, and purple clouds. The sun is low on the horizon, casting a warm glow. On the right side of the frame, the dark silhouette of a steep, rocky cliff or headland rises from the water. The beach in the foreground is mostly in shadow, with some wet sand reflecting the last light of the day.

# Wrap up

## Next Class

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

Lab 4

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