

# SCI199Y Assignment 3

October 22, 2009

## Problem 1:

First, download `wireshark`, a network traffic analysis program, from <http://www.wireshark.org>. Information about how to install and use `wireshark` can be found here: <http://www.cs.toronto.edu/~bor/199y08/A4.pdf>. Next, download a trace of network traffic from <http://www.cs.toronto.edu/~phillipa/trace.cap>. Open this `trace.cap` with `wireshark` and answer the following questions:

1. What Web site is accessed in the trace?
2. For the first 15 “GET” requests, list the value of the “host” field
3. Using DNS<sup>1</sup> find the IP address for:
  - (a) `www.myspace.com`
  - (b) `x.myspacecdn.com`
4. For the IP addresses obtained in the previous question use a regional Internet registry <sup>2</sup> to find the name of the organization that has registered them:
  - (a) IP address of `www.myspace.com`
  - (b) IP address of `x.myspacecdn.com`
5. The DNS query from question 3 (b) gives canonical (alternate) domain names for `x.myspacecdn.com`. Using a domain look up tool <sup>3</sup> determine who has registered these domains
6. Using your favourite search engine look up the organization that registered the domain names in question 5. What does this organization do? Why might we be transferring data from this organization?

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<sup>1</sup><http://networking.ringofsaturn.com/Tools/nslookup.php>

<sup>2</sup><http://www.arin.net>

<sup>3</sup><http://whois.domaintools.com/>

## Problem 2:

For this problem, you will leverage a publicly available `traceroute` server:

`http://registro.br/cgi-bin/nicbr/trt.`

Using your favourite browser go to the above URL. In the text box enter “google.com”, press the “pesquisar” button. Please include a print out of the result of your query with your assignment.

1. Give the host name, IP, and delay (far right column) for the third hop in the traceroute
2. Using the regional Internet registry for Latin America, LACNIC<sup>4</sup> determine who has registered the third hop. Where is this organization located?
3. Give the IP address and delay for the 4th hop along the network path
4. Using the appropriate regional Internet registry, determine which organization has registered the IP for the 4th hop. Based on this record where is this organization located?
5. Compute the different in delay between the 3rd and 4th hops
6. Where do you think the 4th hop is located?
7. Some organizations use the regional Internet registries to geographically locate IP addresses on the Internet. State why this may be a bad idea.

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<sup>4</sup><http://www.lacnic.net>

### **Problem 3:**

Document your use of networking applications for 3 days (please do not document anything you are not comfortable sharing). Applications include things such as Web browsing, e-mail, chat, P2P etc. For each application list the following:

1. application name/description
2. what device did you access this application on?
3. how often did you use this application

In 2-3 paragraphs reflect on your use of networking technologies. Specific questions to answer may include

- How has your use of networking changed in the past year, past 5 years?
- Would you consider any of these applications “essential”, to yourself or to society in general?
- Are there network applications that do not exist yet that you wish you had?