CS42200 Computer Networks Lab Assignments

Lab 1: Exploring Internet Measurement

Description

Lab 1 gives you an exercise for being familiar with the connection between computers through the Internet. Please follow the Seattle Take Home Assignment to finish this assignment. Basically there are 11 steps to complete, and each step includes some simple steps to let you give commands on computers in the Internet.

Resources

In Lab 1, you will likely be using resources that are part of GENI, an NSF sponsored project to enable next-generation internet innovation by creating a global networking testbed. You can access these resources from nearly any network connected computer, provided it has an appropriate installation of Python. You should for example be able to use the lab computers to complete this lab. The lab should be a short introduction to network measurement—you should be able to complete this lab in 30 to 120 minutes.

Requirement

You are required to go through the steps on Seattle Take Home Assignment and write down a report of this lab. The report should include:

- The "browse" result. (step 3)
- Log of hello world result: single computer and multiple computers. (step 4 & 5)
- Log of sending udp pings manually. (step 7)
- Latency information table of sending pings in LAN. (step 8)
- Latency information table of sending pings in WAN. What do you observe? Please discuss it. (step 9)
- Log of packet forwarding. (step 10)
- Log of pinging from your home computer. What's your finding? Is your computer behind an NAT? Discuss the result. (step 11)
- Any other findings you found while you play around. You should make at least 3 additional observations based on your experience.

Lab 1 requires individual work. Please turn in your report individually to Blackboard before due date.

Turn-in Policy and Due Date

Please turn in your report with only text/pdf file format and submit it to Blackboard. Other formats are not acceptable. If you have difficulty to write report in text or pdf format, please feel free to contact the TA to discuss with it.

The due date of Lab 1 is: **Sep. 5, 2012 before class.**
(Please note that Sep. 3 is Labor Day, and there is no class that day.)

Miscellaneous

If you have any question, please feel free to contact the TA: Wei-Yen Day, wday@purdue.edu