Marc Beitchman
CSEP552 Spring 2013
Assignment #3

Source Code:

My node is implemented in python in the CSEtellaNode.py and CSEtellaHelper.py files. Make sure these files are in the same directory and run the following command from a command prompt:

>> python CSEtellaNode.py (server port number)

The webserver is hard coded to run on port 20666.

Code Structure:

The major interfaces I implemented for my node are a cache class, a message generator class and a message reader class. The message generator class simplifies creating messages, the message reader simplifies parsing messages and the cache is a simple queue for storing processed messages. My node initially spawns 3 threads. One thread handles incoming connections to my server, another thread processes out going connections to other servers and the final thread runs the web server. The connection threads pulls IP addresses and ports off of a data structure and then spawns a thread to receive messages and another thread to transmit messages. The threads share data structures for sharing messages. Both threads also share an event that can be signaled if the connection becomes bad. The server accepts new connections and then similar to the connection thread spawns a transmit thread and a pull thread. The hardest part of the project for me was getting my node running in a stable manner on the class network. I had my node running well in a private network locally but then hit a lot of strange issues in the wild. If this was production code, I would definitely need to implement performant and detailed logging to be able to diagnose issues quickly. I also share a lot of data structures between threads which causes a lot of contention so there would definitely be optimizations that could be made to my design.

Text blocks collected as of 6/9 at 11AM:

Replies Observed:
Praveen Kolluri -- kpravink [at] cs.washington.edu
Steve Gribble -- gribble [at] cs.washington.edu -- 664534
Itai Rosenberger -- itairos [at] cs.washington.edu
Melissa Winstanley -- mwinst [at] cs.washington.edu 38210
Johnson Apacible - johnapa [at] uw.edu - 12837
Hari Sudan -- harsudan [at] cs.washington.edu [at port] 37777
Marc Beitchman -- mbeitchman[at]gmail.com -- \m/ \m/
Daniel Leite - dleite [at] cs.washington.edu

Melissa Winstanley -- mwinst [at] cs.washington.edu 38210
Hans Rikhof -- Go Buffs!
James Russell -- jamesrus [at] cs.washington.edu
Sriram Srinivasan -- srisri [at] cs.washington.edu
Paul Payne -- paul [at] payne.io
Doug Coker -- dcoker [at] cs.washington.edu
Alan Ludwig -- alanlu [at] uw.edu
Changhong Yuan -- yuanch[at]cs.washington.edu: Taotao is a good boy, wish you best
Shitanshu Aggarwal -- shitansh [at] cs.washington.edu EC2
Sandeep Repaka -- srepaka [at] cs.washington.edu
Tyler Rigsby - rigsbyt@cs.washington.edu
Changhong Yuan -- yuanch[at]cs.washington.edu: port 25000
Amr Kabardy -- Kabardy@cs.washington.edu
Lei Guang -- leiguang [at] cs.washington.edu
Ian Obermiller -- iano [at] cs.washington.edu -- 47249046
Tommy Ho -- tommyho [at] cs.washington.edu
Shah Bawany -- sbawany [at] cs.washington.edu a

Web Server:

The URL for my web server is:

http://attu4.cs.washington.edu:20666/

I show peers currently connected to and peers currently connected from as well as replies observed and up time. I have included a few screenshots in case the web server goes down.