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Project Evaluation Report

TauNet Version 1.0

November 04, 2015

CS 300 Elements of Software Engineering

What I did and learned:

For this project I had to learn a lot of new things. I had to use a new computer (a Raspberry Pi 2) with an operating system I wasn't familiar with. I had to learn about socketing and communicating through the internet through servers and clients. I chose Python as my new programming language to pick up for this project. Having the class as my team to collaborate and bounce ideas off each other was a new experience. This class feels as if it's mostly like real life scenarios compared to most academia. Using the Raspberry Pi 2 as a node in a larger TauNet Network was a great project. I learned about threading, however wasn't fully able to implement it in my program.

How it worked:

Using Python seemed really easy compared to other programming languages like Java and C++. Because of this, it was easy to develop high level functions such as communicating through the internet on the Raspberry Pi . I would use two sockets: one for listening and one for sending messages. While one listened for incoming messages, it created threads so it can handle multiple clients at once. Each time a message was received or sent, it was encrypted and decrypted so the message would be secret among the TauNet users.

What I liked and disliked:

I disliked that very small errors would mess up the RC4 and ciphersaber2 encryption. Countless hours were spent debugging a small logical error such as "n-1". I liked that this project challenged me and I was able to play with new gadgets and learn much more. This project seemed like the most productive project I had in academia. I liked how the professor talked to us as people and shared his experiences about his work in industry.