

Submission Requirements

If any of these requirements create a problem for you or are unclear, come talk to me.

- Your final project submission must consist of the source-code, makefile, and documentation/results and nothing else (i.e. no core files, object files, class files, binaries, etc).
- You may work with a partner (i.e. groups of size two) on this exercise. You should not discuss your programs, protocols, solutions, etc with other groups. You may discuss them with the TA or me.
- You may NOT include in your programs ANY code that you find on the Internet, or that is not you or your partners original creation without prior approval from the Professor. If you have questions about what code you can use talk to me before including it.

Goals

The goal of the final project is to explore some aspect of networking in depth and develop a network software system that provides a high-performance service.

The final project can be done in one of several specific forms. All projects must include a programming component, an analysis component, a written component, a presentation, and either performance or correctness results.

1. Distributed (meaning several routers and hosts) network packet tracing and monitoring.
2. Peer-to-peer (non-server based) interactive applications (web type BB, IM, ...)
3. Network security: Build and test a honeypot or other network security tool.
4. Any networking related project you are interested in. You need to create a one page description of the proposed project and discuss the project with me before beginning.

Requirements

This project may be done in either the C language or the Java language.

You are encouraged to use the Emulab facility for your project. It can be used for testing the performance or correctness of your networked software or for testing network debugging and analysis tools.

Specific submission requirements

A 2-5 page initial design document is due Tuesday March 30th at 3:30pm. This design document should describe the task you are addressing, what your proposed network architecture is, the software design of your program, and how you will evaluate your solution.

On April 22th each team will turn in a status report with updated details about their project, any changes they made, current results, etc. The report should include all of the details from the initial design plus any additions. The team will also make a brief (few minute) presentation of their project to the rest of the class. This is an informal, but required presentation.

During the May 4th final exam class (note this is not a regularly scheduled class, but our final exam timeslot) each team will do a full presentation of their software and the network concepts used in it in a visual presentation with results, screenshots, documentation, architecture, etc. You should expect detailed questions from the other students and me during this presentation. Your presentation can include a demo of your software if feasible.

Projects

The projects are not specified in full detail here. Part of the assignment is for you to provide the specification detail as well as the implementation. I will be happy to discuss ideas with you at any time, provide comments on the type of specification that would be sufficient for a good project, etc. The initial design you submit will be a key part of this process and I will give you detailed feedback on it.