

Advanced Unix System Administration

Spring 2007

Final Project

Assignment

Build and maintain a reasonably large-scale real-life system of your own design. The system should involve at least two or three networked computers (which will be virtualized containers in our setup), and should do (or at least pretend to do) something useful.

Some ideas:

- An e-commerce site (with separated front-end and back-end, and perhaps a client from which to modify the products being sold)
- The services provided by a small boutique ISP (web hosting, email, perhaps shell access, and such; I can't guarantee that we'll be able to set up a complex network topology, though)
- The back end of a computer lab at an educational institution, perhaps with one or two sample clients

You are of course free to come up with your own ideas, though I need to approve all proposals. You may work in groups of up to three, if you wish.

Components and Timeline

- Project proposals are due by Wednesday, April 18, to the usual email address (<sluo+decal@ocf.berkeley.edu>). I only need one proposal per group, but make sure you tell me who's in the group!
- Your projects should be feature-complete (fully-implemented and working reasonably well, or at least well enough to be tested by someone else) by Wednesday, May 2.
- Between May 2 and the end of classes (Tuesday, May 8), I'll turn you guys loose on each other's projects, the goal being to test the systems, find bugs, and perhaps cause some security problems.
- I'd like a short writeup (2-4 pages) from each group reviewing what your project was, what you did during the project, what problems you encountered, and what you could have done better next time, and also discussing your experiences with the system you tested. There's no hard due date on this, though I need it before we submit grades; you probably want this in before Friday, May 18, to be safe.

Grading

The writeup is worth roughly 50% of the grade, the implementation 30%, and your testing activities 20%. Writeups will be graded on the quality of the evaluation; I want to see that you understand what you're doing and learned something from the project. Implementations will be graded on how well-thought-out the setup is, whether it does what it's supposed to, and how robust and secure it is, with extra points awarded for clever and relevant uses of what you've learned. Your testing activities will be judged based primarily on thoroughness and how well-directed your efforts were; I don't demand that you find giant security holes or major bugs in the project you're testing.

Because this project subsumes the networking project, it's going to be worth 55% of your overall grade. (This, by the way, means it's going to be extremely difficult, if not impossible, to pass the course without turning in a final project. You have been warned!)