

Advanced Unix System Administration

Spring 2008

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 two, if you wish.

Components and Timeline

- Project proposals are due by Monday, April 21, to <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 7.
- Between May 7 and the end of classes (Monday, May 12), 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. I'm going to set a due date of Wednesday, May 14, but I realistically don't care when this gets in, as long as I see it before I have to turn in grades. (The due date corresponds to roughly when that was last year.)

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.

As previously announced, this project is 50% of your grade. (This means, by the way, that it's going to be extremely difficult, if not impossible, to pass the course without turning in a final project. You have been warned!)