



Senior Design Project in Electrical & Computer Engineering



slackware because it works
linux



OPEN SOURCE SOFTWARE In A Coast Guard Environment



Cadets: 1/c Peter Hsu, 1/c Greg Vera, 1/c Greg Loveless

Advisor: LCDR Staier

Sponsor: U.S. Coast Guard Academy Electrical Engineering Section



Project Background

Every year the Coast Guard spends millions of dollars purchasing propriety software for our computer systems. Meanwhile, the majority of web servers on the internet are powered by Apache, which is available for free. The purpose of this project is to study the possibility of using open source software, more specifically, the operation of Linux software in the Coast Guard.

Linux Official Mascot: Tux the Penguin



Project Work

This project will focus on a cost comparison between the two operating systems including:

- hardware and software
- user training
- maintaining a technical support staff.



This project will study the following:

- ease of use for the average user.
- software availability for both platforms.
- studying the feasibility of integrating Linux into the existing Coast Guard network for either a complete or partial replacement to Windows™.
- security differences between the two operating systems, and Linux security procedures.



Project Plan

The first part of the project will be to build a Linux lab that is functionally equivalent to the lab used by 3/c cadets.

The second half of the project will be user testing as 3/c EE's actually use this lab for regular work.

Our goals for the lab are:

- Make the Linux lab user friendly.
- Provide applications that are functionally equivalent to those currently used.
- Easy network maintenance.
- Allow users to access the same network services they would be able to access on the Windows™ Workstations.



Project Deliverables

The first product will be the working Linux lab that is ready to use as a replacement for the Windows™ computers. The second, and arguably more important deliverable is a user study that details how we built the lab and the result of our testing with cadets. This will yield important information on user friendliness, security, and network maintenance.

