System Administration Decal
Intermediate Lab #3
March 13, 2008

Introduction

During Wednesday's lecture, we learned about the gory details of how access to files and directories on a Unix system is managed, and how username, password, and group info are stored. We also briefly covered ACLs and I failed to give a proper demo in class, but I promise to explain it to everyone next lecture.

There are many exercises I wanted to use in this lab that require root access, so I'm going to wait until everyone has virtual server assignments to assign them. Hence, this lab is a little shorter than usual.

Please send your responses to joshk.decal@triplehelix.org and remember to include your `cs198-XX` username. Also, don't forget that there is a homework associated with this week's lecture.

I. NIS+ at the OCF

We learned on Wednesday that although many Unix systems use /etc/passwd, /etc/shadow, and /etc/group to store user and group info, there are many other ways to skin the authorization cat. In this exercise we'll poke around with the system used by the OCF: NIS+. As with last time, you should be using a Linux machine hosted at the OCF for this.

1. Remember that /etc/passwd is meant to store all the usernames that can log in to a computer. Inspect this file on the Linux machine you're on. What is strange about it – does something seem to be missing?
2. The file /etc/nsswitch.conf allows an administrator to configure how authentication is performed in the system. By reading it, what can you conclude about where your user information is stored?
3. Figure out how to use the getent command to retrieve the passwd information for your user name. Then try it for someone else's. What is missing/different?
4. Explore all the utilities in /usr/bin that start with the letters "nis". See if you can find a different way to retrieve your passwd information. Compare the performance of this alternate method to using getent. (Check out the "time" program if you want to quantify the performance difference.) Why do you think it is better/worse?

II. Free Software Culture – Just For Fun

Like any other group of people who work together on something common, there is an outgrowth of culture surrounding it. The free software movement is no exception. In this exercise, we'll take a look at some highlights – just for fun. (And just because it's for fun doesn't mean you don't have to do it, okay?)

1. Free software has a number of "celebrities" – people who are just very well known because of things they have done, or things they have said, or all of the

above. Pick one of these "celebrities" to look up and write a few sentences about them. (They're all a little quirky.)

    a. Richard Stallman – creator of the Free Software Foundation
    b. Linus Torvalds – creator of the Linux kernel
    c. Eric S. Raymond – prolific and outspoken coder famous for his writings
    d. Bill Joy – creator of Berkeley UNIX

2. Programmers are notorious for making up acronyms for conversations instead of simply, for example, speaking English. Find out what these acronyms mean, and, if not entirely obvious, give a context for what the acronym means.

    a. YMMV
    b. TMTOWTDI
    c. TANSTAAFL
    d. PEBCAK
    e. IANAL
    f. SWMBO
    g. LART