

This document contains laboratory exercises related to logging in and out of a computer running UNIX. These exercises also include some simple commands that can be run from the shell command line.

Power up the Windows machine at your desk. Wait for it to boot. The machines in the laboratory do not require you to present credentials to the Windows machine to log in.

Logging In and Logging Out

Preparation

Locate and invoke remote command line access client software

- client software is telnet, running in a DOS command window
- host is unixclass.napavalley.edu
- user name is given in class
- password is given in class

What other applications are on your Windows machine that could be used to log into the FreeBSD box? Look around for PuTTY or other secure shell client.

Your First Log In

Enter the host name to log into, your user name and password into the remote access client. Attempt to log in.

What do you see when you first succeed at logging in? You should see at least three things:

1. date and time you last logged in
2. message of the day (MOTD)
3. shell command prompt

Your First Log Out

Log out by typing *logout* and pressing the *Enter* key. What do you see?

Try Other Ways of Logging Out

Log in again. Type *exit* and press the *Enter* key. What happens?

Log in again. Hold the control key down and press the D key (this sends a control-D to the shell). What do you see?

Case-sensitivity

Attempt to log in, except enter your user name using upper-case for all letters. What happens?

Attempt to log in, except enter your password using the opposite case for all letters in your password (if

a letter is lower case, then use upper case, and vice versa). What happens?

Obtaining Documentation on Applications

Documentation on command-line applications can be obtained in various ways.

Usage Messages

Type *tar* and press the Enter key. What do you see? What do you think the program called *tar* does?

Some command-line applications will generate a usage message summarizing the command and its most useful arguments.

--help argument

Type *tar --help* and press the Enter key. What do you see? What do you think the program called *tar* does?

Try *hostname --help* and press the Enter key. What do you see? What do you think the program called *hostname* does?

Some applications, notably ones supplied by GNU, support the *--help* argument, providing moderately detailed information about the command and a summary of its arguments.

Man Pages

Type *man tar* and press the Enter key. What do you see? Press the spacebar to page downward. Keep pressing the spacebar until you get to the end of the man page and back to the command prompt. What do you think the program called *tar* does?

Type *man tar* and press the Enter key. Then, press the *q* key. What do you see?

Man pages are the building block of the UNIX documentation system. Generally any command you run from the command line will have a man page supplied by the developer of the command. Man pages include a roughly common set of sections, including:

Section Name	Description
name	the name of the command (what you would type into the command line as the first word of the command in order to run the command)
synopsis	a summary of the command and its most common arguments
description	describes what the command does
exit status	describes how the program lets the shell know whether it succeeded or failed, or some other specific status regarding execution

Section Name	Description
examples	a useful section especially for commands that contain lots of options, so that you can find out how to set up the command to do various typical operations it supports
see also	references to related commands – this can be useful in finding the command you really want by starting with the man page of a command that is similar
history	when this command was first introduced into UNIX, and possibly major milestones in its development history

The format within these common sections can vary among man pages. Also, some man pages have various other sections, included as the man page developer deems appropriate.

Info Page Sets

Type *info tar* and press the Enter key. What do you see? Press the spacebar to page downward. Type *q* to exit from the *info* program.

The *info* program is developed by the GNU Project for its commands. It is a text-based hyperlink system (kind of like text-only web browsing without using a mouse).

Finding a Man Page

Type *apropos sleep* and press the Enter key. What do you see?

The *apropos* command lists the commands that relate to the words you supply as arguments to the command. See the man page for more details.

Executing Simple Commands

Type *date* and press the Enter key. What do you see and what does it mean? Try to obtain documentation on this command.

Type *uname* and press the Enter key. What do you see and what does it mean? Try to obtain documentation on this command. Try the command using some of the other options you found in the documentation.

Type *hostname* and press the Enter key. What do you see and what does it mean? Try to obtain documentation on this command.

Type *sleep 10* and press the Enter key. What do you see and what does it mean? Try to obtain documentation on this command.

Type *sleep 10* and press the Enter key. Hold down the *ctrl* key and press the *C* key. What do you see and what does it mean?

Shell History

Press the up arrow key. What happens? Press Enter. What happens?

Most shells will record each of the commands you enter on the command line; this set of commands is called the *history*. Most shells will also provide you with access to your command history, so that you can rerun commands easily or make minor modifications.

Information about Other Users on a UNIX System

Type *who* and press the Enter key. What do you see and what does it mean? Read the man page on this command.

Type *w* and press the Enter key. What do you see and what does it mean? Read the man page on this command.

Type *man write* and press the Enter key. Can you get this command-line IM program to work? Find out about related commands, too.

Completion

Log out. Exit the remote access client. Log out of the Windows machine. Shut down the Windows machine at your desk, which will also power it down.

Summary

You've learned:

- how to remotely access the UNIX machine for the class
- how to log in and log out
- various methods of finding out information on commands that you might run
- command history
- some simple commands: *date*, *uname*, *hostname*, *sleep*, *who*, *w*, *write*