

Intro to Linux

Objective

To complete most the assignments in this course you need some basic understanding of the Linux operating system. Some of you might already be experts in Linux. For those who are not familiar with Linux please use this week as much as you can to master some fundamental concepts. If you are an expert in this area treat this assignment as a warm up session.

Note: For this lab you will need to boot the linux_student machine in order to get an idea of all the processes.

1.0 Introduction to Linux

In this section you will learn about basic Linux operation, commands, their function and proper usage.

1. What is the first process a typical Linux kernel starts?
2. Explore and report your Linux box's startup procedure in detail. You should read and explain what each startup script does and what executable files they execute.
3. Find a file in the Linux virtual machine assigned to you in ISIS that contains the string "Hello CS6823" and report the command you used to find this file.
4. What command would you use to see the processes that are running currently on your Linux system? Explain how you can kill (stop) a process.
5. How do you setup variables in bash? How would you remove them without logging out?
6. What the command that outputs the last bootup time of the system?
7. What is meant by real and effective user-IDs
8. Categorize the following commands (see Section 1.2) in Linux as one of:
 - File and Directory Management
 - User Management
 - Process Management
 - Communication
 - Editing
 - Misc. commands

Also give a brief (1-4 line description) for each command. You should describe their use and the most important switches (options) used with these commands.

1.2 Commands

grep
find
man
ssh
sftp
ls
chmod
chown
passwd
useradd and adduser
su
vi
rmdir
whereis
lsmod
insmod
make
fdisk and cfdisk
| pipe
>, >> (redirection)
ln
rm
cp
mv
ld
ftp
more
less
cat
tar
top
ps
kill
df
last
patch
mkdir