Open Source OS - LAB 02 – Basic Linux Commands

Review

Although you do not have to be a Linux expert to run jobs on the BSBC cluster, it is to your advantage to have a basic understanding of Linux to enable you to work more efficiently. Detailed information about a specific Linux command may be found in the command's manual pages by running **man *command name***. In addition to using man pages, the Internet offers a plethora of websites describing basic and advanced Linux commands. For now, some basic commands and common bash operators are listed in the tables below to allow you to familiarize yourself with the cluster.

Commonly Used Linux Commands

Command	Description
man	display details about an instruction
ls	list contents of the current directory
ls -l	detailed listing of directory contents, shows permissions, owner, etc.
ls -a	list all files (including hidden files)
ls -la	detailed listing of all files (note that options can be combined)
cd	change directory
cd ../	backup one level from the current directory
pwd	print current working directory
touch	create an empty file
mkdir	make a new directory
rm	remove files and directories
rm -rf	recursively remove all files and directories under the specified directory
cat	list file contents
less	list file contents – one screen at a time
tail	list the end of the file (default – displays last 10 lines)
tail -n	list the last n lines of a file
cp	copy file
mv	rename a file
echo	echo values to the screen example: echo $PATH – prints the value of the PATH variable
grep	command line text search utiltity example: grep blue colors.txt – list all lines with the word blue from the colorlist.txt file
ps	list currently running processes

Helpful Linux Operators

Operator	Description	Explanation
>	redirection operator	command > filename redirect output to a file
<	redirection operator	command < filename redirect a file to a command
>>	append operator	command >> filename redirect output and append to a file
1>filename	redirect stdout to a file	stdout – where program writes its output
2>filename	redirect stderr to a file	stderr- where program writes errors
2>&1	redirects stderr to stdout	
tee	splits the output of a program so it can be seen on the terminal display and also saved to a file	unless redirected stdout and stderr are sent to the terminal that initiated the program
|	pipe – used to combine simple commands	ls -l | grep test list all filenames that contain 'test"
2>&1 | tee logfile	display both stderr & stdout to terminal and tee output to a logfile	command 2>&1 | tee logfile

As a normal (non-privileged) user, you may not have the required privileges to execute some commands or to view files belonging to other users or groups. If you have questions regarding your permissions, Group Membership, or viewing privileges

LAB Procedures

Take screen shots that show all activities below:

1- Login to Linux with the admin user (student)
2- Use man command to display help for below commands
   pwd, ls, cd, cp, mkdir, rmdir, rm
   (take screen shot for 1st page from man command output)
3- Display the current folder with pwd command
4- Create a new folder labfolder1
5- Change directory to folder labfolder1 with cd command and list contents
6- Create new file myfile1 with touch command
7- List the contents showing the attributes and size of the contents
8- Edit the file using nano command and write your name, department and ID then save the file with CTRL-O and Exit with CTRL-X.
9- List the contents showing the attributes and size of the contents
10- Show the contents of the file using cat command
11- Sort the file contents using sort command By default, the sort command sorts information displayed on screen assuming the contents are ASCII.
12- Show the contents of the file using cat command

13- Copy the file to /home/student using cp command

14- Change directory to upper level and list the contents

15- Try removing the folder with rmdir command and list the contents

16- Change directory to labfolder1 and remove the file myfile1 then list the contents

17- Change directory to upper level and list the contents

18- Try removing the folder labfolder1 with rmdir command and list the contents