

Lab0

Once the virtual machine has completed booting, using the command **pwd**, what is the current working directory?

pwd => /root

How many files are contained within the home directory? One simple way to do this is by using the **ls** command.

ls /home => 3 files

How many hidden files are contained within the home directory? Without any arguments, the **ls** command doesn't show hidden files. Look at the man page for **ls** by running the command "man ls". You can navigate in the man page by using the up and down keys.

ls -a /home => 9 files

HINT: Hidden files in UNIX/Linux have a "." in front of them. For example, ".bash_history" is a hidden file.

What directory would you expect to find the **cp** command located?

whereis cp => /bin/cp

Where is the command to create a directory, **mkdir**, located on the filesystem?

whereis mkdir => /bin/mkdir

What command did you use to find the command, and where it is located?

Command: whereis Located: /usr/bin/whereis

Give one alternative to the command you initially used to find **mkdir**.

Alternative: which

Use the **mkdir** command to create a new directory under the root user's home directory (e.g. /root), name it anything you'd like. Create a file under that new directory using the **touch** command. What does the contents of the new directory show?

mkdir new

touch new/new2

Contents: new2

By default, the `rm` command will not remove directories. You can use the flag `-r` to tell the remove command to remove recursively e.g. remove all files & directories under the directory being specified for removal (and the specified directory itself). What happens when you run the command “`rm`” without `-rf` to remove the directory you created in #6?

rm: cannot remove 'new' : is a directory

What happens when you run the command “`rm -rf`” to remove the directory you created in #6?

The directory and its contents are removed.

Print out the contents of `/etc/passwd`, which contains the list of users on the system in a very specific format. This format is:

username:password:user_id_number:group_id_number:full_name:home_directory:default_shell

Using a combination of the `cat` and `cut` command, only print out a list of just usernames. Write out the series of commands below.

cat /etc/passwd | cut -d: -f1

Using a combination of the `cat`, `cut`, and `tail` command, only print out the username of the last user in the file. Write out the series of commands below.

cat /etc/passwd | cut -d: -f1 | tail -n1

Using a combination of the `cat`, `cut`, and `sort` command only print out the usernames, sorted alphabetically, in descending order. Write out the series of commands below.

cat /etc/passwd | cut -d: -f1 | sort -r

Is the Debian Almquist Shell (`dash`) available on this virtual machine? Is the Fish shell (`fish`) available? List two ways below that you can use to check the availability of a shell.

Dash is available but Fish is not.

Commands: `chsh -l` or `which <shell name>`

What is the current value of the `$PATH` environment variable?

/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin:/root/bin

How would you modify it to add the directory /usr/local/bin?

export PATH=\$PATH:/usr/local/bin

Issue this command and explain the result. "> time; date >> time; cat < time"

>time => creates a file called "time" with stdout

date>>time => appends the stdout of date to the file "time"

cat<time => redirects the stdout of "time" to the cat command

Take a [snapshot of the virtual machine](#), then run the command "rm / -rf" on your virtual machine. What happened? Restart the virtual machine (you may have to click Machine, then Reset), does it boot?

No, it starts with a command prompt from the grub

grub>