

CYSE 609 – FUND LINUX SYST FOR CYBER

Module 4 | File System in Linux

Total: 100 Points

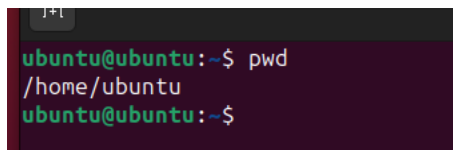
Name: [Click or tap here to enter text.](#)

Directions: Practice the following tasks in Linux VM – Ubuntu using various Linux commands for file management. Insert screenshots where applicable. Upload completed document in Canvas.

Task 1: Linux File System Management

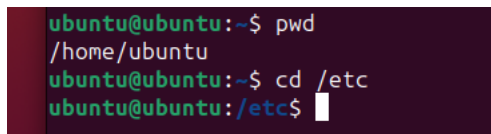
- Open a terminal window. Use correct Linux command to display your current working directory.

Upload the screenshot for this step after executing the command.



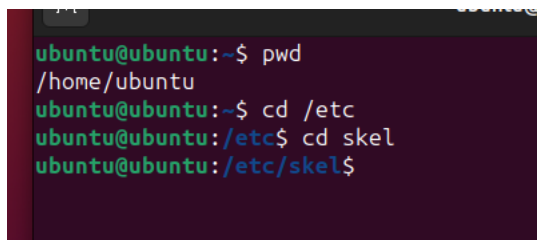
```
ubuntu@ubuntu:~$ pwd
/home/ubuntu
ubuntu@ubuntu:~$
```

- Using an absolute pathname, switch to the **/etc directory**. Upload the screenshot for this step after executing the command.



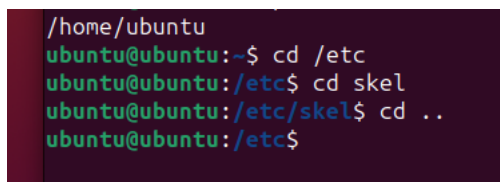
```
ubuntu@ubuntu:~$ pwd
/home/ubuntu
ubuntu@ubuntu:~$ cd /etc
ubuntu@ubuntu:/etc$
```

- Using a relative pathname, move to the **/etc/skel directory**. Upload the screenshot for this step after executing the command.



```
ubuntu@ubuntu:~$ pwd
/home/ubuntu
ubuntu@ubuntu:~$ cd /etc
ubuntu@ubuntu:/etc$ cd skel
ubuntu@ubuntu:/etc/skel$
```

- Using a relative pathname, move **up** one directory. Upload the screenshot for this step after executing the command. Upload the screenshot for this step after executing the command.



```
/home/ubuntu
ubuntu@ubuntu:~$ cd /etc
ubuntu@ubuntu:/etc$ cd skel
ubuntu@ubuntu:/etc/skel$ cd ..
ubuntu@ubuntu:/etc$
```

- List the files in the current directory. Upload the screenshot for this step after executing the command.

```
ubuntu@ubuntu: /etc
dpkg          modules      timezone
e2scrub.conf  modules-load.d tmpfiles.d
emacs         mtab        ubuntu-advantage
environment   nanorc      ucf.conf
environment.d netconfig   udev
ethertypes    netplan     udisks2
fonts         network     ufw
fprintd.conf  networkd-dispatcher update-manager
fstab         networks    update-motd.d
fuse.conf     newt        update-notifier
fwupd         nftables.conf usb_modeswitch.conf
gai.conf      nsswitch.conf usb_modeswitch.d
gdb           openvpn     vconsole.conf
gdm3          opt         vim
geoclue       os-release  vtrgb
ghostscript   pam.conf    vulkan
glvnd         pam.d       wgetrc
gnome         papersize   wpa_supplicant
groff         passwd      xattr.conf
group         passwd-     xdg
group-        pcmcia      xml
grub.d        perl        zfs
gshadow       pki         zsh_command_not_found
ubuntu@ubuntu: /etc$
```

- Run the command that will determine the type of contents in the **/etc/group** file. Upload the screenshot for this step after executing the command.

```
gnome         papersize   wpa_supplicant
groff         passwd      xattr.conf
group         passwd-     xdg
group-        pcmcia      xml
grub.d        perl        zfs
gshadow       pki         zsh_command_not_found
ubuntu@ubuntu: /etc$ file /etc/group
/etc/group: ASCII text
ubuntu@ubuntu: /etc$
```

- Display only the last five lines of the **/etc/group** file. Upload the screenshot for this step after executing the command.

```
/etc/group: ASCII text
ubuntu@ubuntu: /etc$ tail -n 5 /etc/group
ubuntu:x:1000:
sambashare:x:130:ubuntu
gamemode:x:993:
gnome-initial-setup:x:992:
installer:x:1001:
ubuntu@ubuntu: /etc$
```

- Execute the command to return to your home directory. Upload the screenshot for this step after executing the command.

```
gamemode:x:993:
gnome-initial-setup:x:992:
installer:x:1001:
ubuntu@ubuntu:/etc$ cd ~
ubuntu@ubuntu:~$
```

- Use the **grep** command to search for the user 'admin' in the **/etc/passwd** file and upload a screenshot after executing the command.

```
installer:x:1001:
ubuntu@ubuntu:/etc$ cd ~
ubuntu@ubuntu:~$ grep -n admin /etc/passwd
ubuntu@ubuntu:~$
```

- Copy the **/etc/ppp** directory into the current directory (and ignore any “Permission denied” error messages). Upload the screenshot for this step after executing the command.

```
ubuntu@ubuntu:~$ cp -r /etc/ppp .
cp: cannot open '/etc/ppp/chap-secrets' for reading: Permission denied
cp: cannot open '/etc/ppp/pap-secrets' for reading: Permission denied
ubuntu@ubuntu:~$
```

- Rename the **ppp** directory that is located in the current directory to peers. Upload the screenshot for this step after executing the command.

```
ubuntu@ubuntu:~$ grep -n admin /etc/passwd
ubuntu@ubuntu:~$ cp -r /etc/ppp .
cp: cannot open '/etc/ppp/chap-secrets' for reading: Permission denied
cp: cannot open '/etc/ppp/pap-secrets' for reading: Permission denied
ubuntu@ubuntu:~$ mv ppp peers
ubuntu@ubuntu:~$
```

- Create a tar file named **ppp.tar** that contains the contents of the **/etc/ppp** directory. (Ignore any error messages.). Upload the screenshot for this step after executing the command.

```

ubuntu@ubuntu:~$ mv ppp peers
ubuntu@ubuntu:~$ tar -cvf ppp.tar /etc/ppp
tar: Removing leading '/' from member names
/etc/ppp/
tar: /etc/ppp/chap-secrets: Cannot open: Permission denied
/etc/ppp/ip-down
/etc/ppp/ip-down.d/
/etc/ppp/ip-down.d/0000usepeerdns
/etc/ppp/ip-pre-up
/etc/ppp/ip-pre-up.d/
/etc/ppp/ip-up
/etc/ppp/ip-up.d/
/etc/ppp/ip-up.d/0000usepeerdns
/etc/ppp/ipv6-down
/etc/ppp/ipv6-down.d/
/etc/ppp/ipv6-up
/etc/ppp/ipv6-up.d/
/etc/ppp/options
/etc/ppp/options.pptp
tar: /etc/ppp/pap-secrets: Cannot open: Permission denied
/etc/ppp/peers/
/etc/ppp/peers/provider
tar: Exiting with failure status due to previous errors
ubuntu@ubuntu:~$

```

- Use the `ls` command `ls` to perform long display for **ppp.tar** file. Upload the screenshot for this step after executing the command.

```

tar: Exiting with failure status due to previous errors
ubuntu@ubuntu:~$ ls -l ppp.tar
-rw-rw-r-- 1 ubuntu ubuntu 40960 Feb 15 21:00 ppp.tar
ubuntu@ubuntu:~$ ls ppp.tar
ppp.tar
ubuntu@ubuntu:~$

```

- Compress the **ppp.tar** file by using the **gzip** command. Upload the screenshot for this step after executing the command.

```

ubuntu@ubuntu:~$ gzip ppp.tar
ubuntu@ubuntu:~$

```

- Use the command `ls` to perform long display for **ppp.tar.gz** file, which should be created in the previous step. Upload the screenshot for this step after executing the command.

```

ubuntu@ubuntu:~$ gzip ppp.tar
ubuntu@ubuntu:~$ ls -l ppp.tar.gz
-rw-rw-r-- 1 ubuntu ubuntu 8187 Feb 15 21:00 ppp.tar.gz
ubuntu@ubuntu:~$

```

- Use Linux command decompress the **ppp.tar.gz** file. Upload the screenshot for this step after executing the command.

```

-rw-rw-r-- 1 ubuntu ubuntu 8187 Feb 15 21:00 ppp.tar.gz
ubuntu@ubuntu:~$ gunzip ppp.tar.gz
ubuntu@ubuntu:~$

```

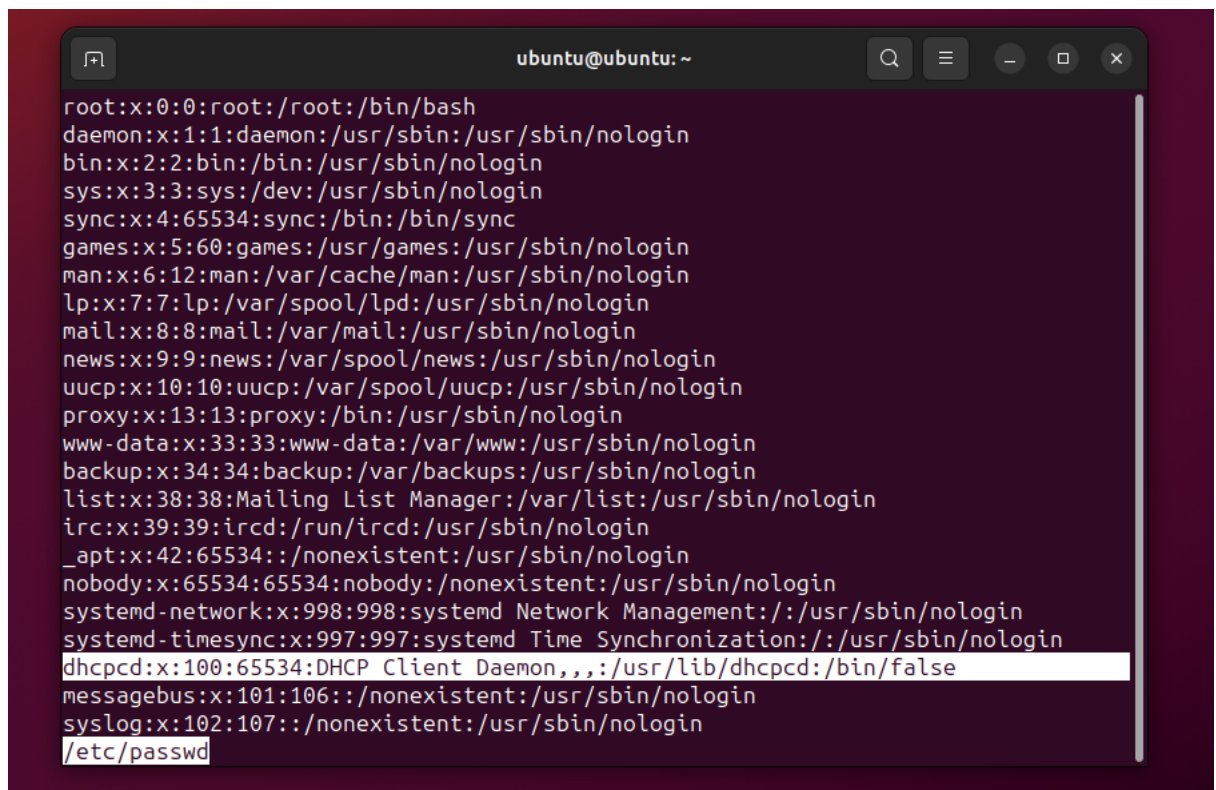
- Use the command **ls** to perform long display for **ppp.tar** file. Upload the screenshot for this step after executing the command.

```
ubuntu@ubuntu:~$ gunzip ppp.tar.gz
ubuntu@ubuntu:~$ ls -l ppp.tar
-rw-rw-r-- 1 ubuntu ubuntu 40960 Feb 15 21:00 ppp.tar
ubuntu@ubuntu:~$
```

- Delete the **ppp.tar** file using correct Linux command. Upload the screenshot for this step after executing the command.

```
ubuntu@ubuntu:~$ ls -l ppp.tar
-rw-rw-r-- 1 ubuntu ubuntu 40960 Feb 15 21:00 ppp.tar
ubuntu@ubuntu:~$ rm ppp.tar
ubuntu@ubuntu:~$
```

- Use the Linux command **less** to display **one** page of the **/etc/passwd** file. Type '**q**' to quit after taking the screenshot of **less** command. Upload the screenshot for this step after executing the command. Upload the screenshot for this step after executing the command.



```
ubuntu@ubuntu: ~
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
_apt:x:42:65534:/:nonexistent:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:998:998:systemd Network Management:/:/usr/sbin/nologin
systemd-timesync:x:997:997:systemd Time Synchronization:/:/usr/sbin/nologin
dhcpd:x:100:65534:DHCP Client Daemon,,,:/usr/lib/dhcpd:/bin/false
messagebus:x:101:106:/:nonexistent:/usr/sbin/nologin
syslog:x:102:107:/:nonexistent:/usr/sbin/nologin
/etc/passwd
```

- Execute the command **head** to display the top 10 lines of **/etc/passwd** file. Upload the screenshot for this step after executing the command.

```
ubuntu@ubuntu:~$ less /etc/passwd
ubuntu@ubuntu:~$ head /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
ubuntu@ubuntu:~$
```

Grading Criteria

Task 1: Linux File System Management [20 subtasks x 5 Points = 100 Points]