

## Module 4 Linux Essentials

### TASK 4.3

After you have logged into the system, do the following.

1. Invoke **pwd** to see your current working directory (there should be your home directory).

2. Collect output of these commands

**ls -l /** — show catalog “-l” long listing format “/” root directory of file system

**ls** — show catalog in current directory

**ls ~** — show catalog “~” home directory

**ls -l** — show catalog “-l” long listing in current directory

**ls -a** — show catalog “-a” or “—all” do not ignore entries starting with in current directory

**ls -la** — show catalog “-l” long listing format “-a” or “—all” do not ignore entries starting with in current directory

**ls -lda ~** show catalog “-l” long listing format “-d” or “—directory” list directories themselves, not their contents “-a” or “—all” do not ignore entries starting with in current directory

```
[ec2-user@ip-172-31-38-56 ~]$ pwd
/home/ec2-user
[ec2-user@ip-172-31-38-56 ~]$ ls -l /
total 16
lrwxrwxrwx 1 root root 7 Apr 7 01:50 bin -> usr/bin
dr-xr-xr-x 4 root root 4096 Apr 7 01:51 boot
drwxr-xr-x 15 root root 2820 Apr 15 19:39 dev
drwxr-xr-x 80 root root 8192 Apr 15 19:39 etc
drwxr-xr-x 3 root root 22 Apr 15 19:39 home
lrwxrwxrwx 1 root root 7 Apr 7 01:50 lib -> usr/lib
lrwxrwxrwx 1 root root 9 Apr 7 01:50 lib64 -> usr/lib64
drwxr-xr-x 2 root root 6 Apr 7 01:50 local
drwxr-xr-x 2 root root 6 Apr 9 2019 media
drwxr-xr-x 2 root root 6 Apr 9 2019 mnt
drwxr-xr-x 4 root root 27 Apr 7 01:51 opt
dr-xr-xr-x 95 root root 0 Apr 15 19:39 proc
dr-xr-x--- 3 root root 103 Apr 15 19:39 root
drwxr-xr-x 27 root root 960 Apr 17 02:46 run
lrwxrwxrwx 1 root root 8 Apr 7 01:50 sbin -> usr/sbin
drwxr-xr-x 2 root root 6 Apr 9 2019 srv
dr-xr-xr-x 13 root root 0 Apr 17 12:37 sys
drwxrwxrwt 8 root root 172 Apr 17 03:13 tmp
drwxr-xr-x 13 root root 155 Apr 7 01:50 usr
drwxr-xr-x 19 root root 269 Apr 15 19:39 var
[ec2-user@ip-172-31-38-56 ~]$ ls
[ec2-user@ip-172-31-38-56 ~]$ ls ~
[ec2-user@ip-172-31-38-56 ~]$ ls -l
total 0
[ec2-user@ip-172-31-38-56 ~]$ ls -a
. .. .bash_history .bash_logout .bash_profile .bashrc .ssh
[ec2-user@ip-172-31-38-56 ~]$ ls -la
total 16
drwx----- 3 ec2-user ec2-user 95 Apr 15 20:07 .
drwxr-xr-x 3 root root 22 Apr 15 19:39 ..
-rw----- 1 ec2-user ec2-user 370 Apr 15 22:02 .bash_history
-rw-r--r-- 1 ec2-user ec2-user 18 Jan 16 00:56 .bash_logout
-rw-r--r-- 1 ec2-user ec2-user 193 Jan 16 00:56 .bash_profile
-rw-r--r-- 1 ec2-user ec2-user 231 Jan 16 00:56 .bashrc
drwx----- 2 ec2-user ec2-user 29 Apr 15 19:39 .ssh
[ec2-user@ip-172-31-38-56 ~]$ ls -lds ~
0 drwx----- 3 ec2-user ec2-user 95 Apr 15 20:07 /home/ec2-user
[ec2-user@ip-172-31-38-56 ~]$ ls -lda ~
drwx----- 3 ec2-user ec2-user 95 Apr 15 20:07 /home/ec2-user
[ec2-user@ip-172-31-38-56 ~]$
```

Note differences between produced outputs. Describe (in few words) purposes of these commands.

3. Execute and describe the following commands (store the output, if any):

**mkdir** test - create directory test

**cd** test - go to directory test

**pwd** - print working directory

**touch** test.txt - create file test.txt

**ls -l** test.txt - show catalog “-l” long listing format “test.txt” destination file name

**mkdir** test2 - create directory test2

**mv** test.txt test2 - move file test.txt to directory test2 destroy original - cut)

**cd** test2 - go to directory test2

**ls** - show catalog

**mv** test.txt test2.txt - move file test.txt to file test2.txt (destroy original - cut)

**ls** - show catalog

**cp** test2.txt .. - copy test2.txt to the directory one level above the current working directory (save original)

**cd** .. - go to the directory one level above the current working directory

**ls** - show catalog

**rm** test2.txt - delete file test2.txt

**rmdir** test2 - delete directory test2

```
[ec2-user@ip-172-31-38-56 ~]$ mkdir test
[ec2-user@ip-172-31-38-56 ~]$ cd test
[ec2-user@ip-172-31-38-56 test]$ pwd
/home/ec2-user/test
[ec2-user@ip-172-31-38-56 test]$ touch test.txt
[ec2-user@ip-172-31-38-56 test]$ ls -l test.txt
-rw-rw-r-- 1 ec2-user ec2-user 0 Apr 17 12:57 test.txt
[ec2-user@ip-172-31-38-56 test]$ mkdir test2
[ec2-user@ip-172-31-38-56 test]$ mv test.txt test2
[ec2-user@ip-172-31-38-56 test]$ cd test2/
[ec2-user@ip-172-31-38-56 test2]$ ls
test.txt
[ec2-user@ip-172-31-38-56 test2]$ mv test.txt test2.txt
[ec2-user@ip-172-31-38-56 test2]$ ls
test2.txt
[ec2-user@ip-172-31-38-56 test2]$ cp test2.txt ..
[ec2-user@ip-172-31-38-56 test2]$ cd ..
[ec2-user@ip-172-31-38-56 test]$ ls
test2  test2.txt
[ec2-user@ip-172-31-38-56 test]$ rm test2
test2/  test2.txt
[ec2-user@ip-172-31-38-56 test]$ rm test2.txt
[ec2-user@ip-172-31-38-56 test]$ rmdir test2/
rmdir: failed to remove 'test2/': Directory not empty
[ec2-user@ip-172-31-38-56 test]$ rm test2/test2.txt
[ec2-user@ip-172-31-38-56 test]$ rmdir test2/
[ec2-user@ip-172-31-38-56 test]$ ls
[ec2-user@ip-172-31-38-56 test]$
```

4. Execute and describe the difference

**cat** /etc/fstab — displays file contents in fine in command line out

```
[ec2-user@ip-172-31-38-56 test]$ cat /etc/fstab
#
UUID=55da5202-8008-43e8-8ade-2572319d9185    /                xfs      defaults,noatime 1    1
```

**less** /etc/fstab — displays file contents or command output one page at a time in your terminal

```
#
UUID=55da5202-8008-43e8-8ade-2572319d9185    /                xfs      defaults,noatime 1    1
/etc/fstab (END)
```

**more** /etc/fstab — displays text files in the command prompt, displaying one screen at a time in case the file is large

```
[ec2-user@ip-172-31-38-56 test]$ more /etc/fstab
#
UUID=55da5202-8008-43e8-8ade-2572319d9185    /                xfs      defaults,noatime 1    1
[ec2-user@ip-172-31-38-56 test]$
```

5. Add to archive all 'test' directories.

- a. to the pure 'tar';
  - b. to the zipped 'tar' with only tar command;
  - c. to the zipped 'tar' with gzip command;
- extract from archives all above.

```
[ec2-user@ip-172-31-38-56 ~]$ tar -czf testzip.tar test/
[ec2-user@ip-172-31-38-56 ~]$ ls
test  testzip.tar
[ec2-user@ip-172-31-38-56 ~]$ rm testzip.tar
[ec2-user@ip-172-31-38-56 ~]$ ls
test
[ec2-user@ip-172-31-38-56 ~]$ tar -cf test1.tar test/
[ec2-user@ip-172-31-38-56 ~]$ ls
test  test1.tar
[ec2-user@ip-172-31-38-56 ~]$ tar -czf testzip.tar test/
[ec2-user@ip-172-31-38-56 ~]$ ls
test  test1.tar  testzip.tar
[ec2-user@ip-172-31-38-56 ~]$ gzip
.bash_history  .bash_profile  .cache/        .local/        test/           testzip.tar
.bash_logout   .bashrc        .config/       .ssh/          test1.tar
[ec2-user@ip-172-31-38-56 ~]$ gzip test/
gzip: test/ is a directory -- ignored
[ec2-user@ip-172-31-38-56 ~]$ tar -czf teszip.tar.gz test
test/      test1.tar  testzip.tar
[ec2-user@ip-172-31-38-56 ~]$ tar -czf teszip.tar.gz test/
[ec2-user@ip-172-31-38-56 ~]$ ls
test  test1.tar  testzip.tar  teszip.tar.gz
[ec2-user@ip-172-31-38-56 ~]$ gunzip teszip.tar.gz
[ec2-user@ip-172-31-38-56 ~]$ ls
test  test1.tar  testzip.tar
[ec2-user@ip-172-31-38-56 ~]$ tar xf test
test/      test1.tar  testzip.tar
[ec2-user@ip-172-31-38-56 ~]$ tar xf test1.tar
[ec2-user@ip-172-31-38-56 ~]$ ls
test  test1.tar  testzip.tar
[ec2-user@ip-172-31-38-56 ~]$
```

5. Look through man pages of the listed above commands.