Working with files

Working with files in linux involves creation, modification, identification, deletion, renaming and moving using some basic commands.

1. Creation

There are four ways to create a file.

cat

cat > filename - it creates a file & if you again execute the same command the content is overwritten.

```
[root@localhost ~]# cat > file1
hello world
```

cat filename -used to read the content from the file.

cat >> filename -to append the content in the file.

```
[root@localhost ~]# cat >> file1
welcome to the page
[root@localhost ~]# cat file1
hello world
welcome to the page
```

touch

touch filename -used to create empty files.

touch filename{1..n} OR touch file1, file2, file3 - used to create multiple empty files.

```
[root@localhost "]# touch file1
[root@localhost "]# touch file{1..10}
[root@localhost "]# ls
anaconda-ks.cfg file1 file10 file2 file3 file4 file5 file6 file7 file8 file9 swati
[root@localhost "]# _
```

touch .filename — to create hidden files

[root@localhost ~]# touch .fileh

nano

nano filename

vi

Vi is a editor in which there are four modes

- 1. Normal/default/command mode
- 2. Insertion mode
- 3. Visual mode
- 4. Execution mode

syntax: vi filename

there are some commands to exit from the editor

:q- quit without saving

:q!-quit without saving forcefully

:w- save and stay in the file

:wq or x -save &quit

:wq! or x!- save & quit forcefully

to create a directory

mkdir directoryname - to create a single directory mkdir -p dir1/dir2/dir3 - to create multiple directories

[root@localhost ~]# mkdir dir1 [root@localhost ~]# mkdir -p dir1/dir2/dir3 [root@localhost ~]#

cd - is used to change the directory

cd .. - is used to come one directory back from the present directory

```
lroot@localhost ~1# cd dir1/dir2/dir3
lroot@localhost dir31# cd ..
lroot@localhost dir21# cd
lroot@localhost ~1#
```

File reading types

less filename - to read data top - bottom tail filename - to read data bottom -top head filename - to read first ten lines

Basic commands:

1. pwd (print working directory) - it shows our current working directory

```
[root@localhost dir3]# pwd
/root/dir1/dir2/dir3
```

2. Is - to list the files and directories in the present directory.

```
[root@localhost ~]# ls
anaconda-ks.cfg dir1 file1 file10 file2 file3 file4 file5 file6 file7 file8 file9 swati
```

3. Is -a to see all the files and directories with hidden files and directories

```
root@localhost ~1# ls -a
anaconda-ks.cfg .bash_profile .cshrc file1 file2 file4 file6 file8 .fileh .tcshrc
. .bash_logout .bashrc dir1 file10 file3 file5 file7 file9 swati
```

4. II - long list - it displays a detailed information of file and directories.

```
[root@localhost ~]# 11
total 4
-rw-----. 1 root root 1425 Apr  6 06:52 anaconda-ks.cfg
drwxr-xr-x. 3 root root
                          18 Apr
                                 6 11:37 dir1
                          0 Apr 6 11:34 file1
rw-r--r--. 1 root root
rw-r--r--. 1 root root
                          0 Apr
                                 6 11:34 file10
                          0 Apr
                                 6 11:34 file2
rw-r--r--. 1 root root
                          0 Apr
                                 6 11:34 file3
     -r--. 1 root root
rw-r--r--. 1 root root
                          0 Apr
                                 6 11:34 file4
                                 6 11:34 file5
rw-r--r--. 1 root root
                          0 Apr
rw-r--r--. 1 root root
                          0 Apr
                                 6 11:34 file6
                          0 Apr
      -r--. 1 root root
                                 6 11:34 file?
rw-r--r--. 1 root root
                          0 Apr
                                 6 11:34 file8
rw-r--r--. 1 root root
                          0 Apr 6 11:34 file9
lrwxr-xr-x. 2 root root 21 Apr 6 06:55 swati
```

5. II -d directoryname — to view a particular directory

```
[root@localhost ~]# | 11 -d dir1
drwxr-xr-x. 3 root root 18 Apr 6 11:37 dir1
```

File Permission

file has read, write and execute permission.

Permissions can be given in two ways

1) Alphabets

2) Numeric

r- read = 4

w-write = 2

x- execute =1

The permissions are given to the users, groups and other users . i.e ugo

Full permission

Default permission

dir - 777 dir -775 file -666 file -644

permission are given using

chmod

syntax: chmod ugo + rwx — filename to give full permission.

chmod 644 filename — to give full permission

```
[root@localhost ~]# chmod ugo+rwx file1
[root@localhost ~]# 11
total 4
-rw-----. 1 root root 1425 Apr 6 06:52 anaconda-ks.cfg
drwxr-xr-x. 3 root root 18 Apr 6 11:37 dir1
                                6 11:34 file1
rwxrwxrwx. 1 root root
                         0 Apr
                         0 Apr 6 11:34 file10
rw-r--r--. 1 root root
-rw-r--r--. 1 root root
                         0 Apr
                                6 11:34 file2
rw-r--r-. 1 root root
                        0 Apr
                                6 11:34 file3
rw-r--r--. 1 root root
                                6 11:34 file4
                         0 Apr
rw-r--r-. 1 root root
                         0 Apr 6 11:34 file5
-rw-r--r--. 1 root root
                         0 Apr 6 11:34 file6
rw-r--r--. 1 root root
                         0 Apr
                                6 11:34 file?
rw-r--r--. 1 root root
                         0 Apr 6 11:34 file8
rw-r--r-. 1 root root
                         0 Apr 6 11:34 file9
drwxr-xr-x. 2 root root
                         21 Apr 6 06:55 swati
[root@localhost ~]# chmod 644 file1
[root@localhost ~]# 11
total 4
-rw-----. 1 root root 1425 Apr 6 06:52 anaconda-ks.cfg
drwxr-xr-x. 3 root root 18 Apr
                                6 11:37 dir1
-rw-r--r--. 1 root root
                         0 Apr 6 11:34 file1
-rw-r--r--. 1 root root
                         0 Apr
                                6 11:34 file10
rw-r--r--. 1 root root
                         0 Apr
                                6 11:34 file2
-rw-r--r--. 1 root root
                         0 Apr
                                6 11:34 file3
-rw-r--r--. 1 root root
                         0 Apr 6 11:34 file4
-rw-r--r--. 1 root root
                         0 Apr 6 11:34 file5
rw-r--r--. 1 root root
                                6 11:34 file6
                         0 Apr
                         0 Apr 6 11:34 file7
rw-r--r--. 1 root root
rw-r--r--. 1 root root
                         0 Apr
                                6 11:34 file8
-rw-r--r--. 1 root root
                         0 Apr
                                6 11:34 file9
drwxr-xr-x. 2 root root
                                6 06:55 swati
                         21 Apr
```

we can change the owner of the file by using — chown

syntax: chown uname:gname filename

```
[root@localhost ~1# chown swati:root file1
[root@localhost ~1# 11
total 4
-rw-----. 1 root root 1425 Apr 6 06:52 anaconda-ks.cfg
drwxr-xr-x. 3 root root 18 Apr 6 11:37 dir1
-rw-r--r-. 1 swati root 0 Apr 6 11:34 file1
```

Identification

There are two file types

- 1. User defined 1. normal (-) 2. directory (d) 3. link (l)
- 2. System defined 1. block (b) 2. character (c) 3. socket (s) 4. pipe (p)

Moving and Renaming

mv — is used to move a file from source to destination .The file is only present at the destination.

syntax: mv filename destination(path)

mv — is also used to rename a file

```
[root@localhost ~]# mv file8 /opt/
[root@localhost ~]# cd /opt/
[root@localhost opt]# ls
file8
[root@localhost opt]# _
```

syntax : mv old_filename ./new_filename

```
[root@localhost opt]# mv file8 newfile
[root@localhost opt]# ls
newfile
[root@localhost opt]# _
```

cp — is used to copy the file .The is present at both the location.

syntax : cp filename destination(path)

```
[root@localhost ~]# cd /opt/
[root@localhost opt]# ls
[ile7 newfile
```

Deletion

```
rm — to remove a empty file
rm -rf — r- recursive f- forcefully deletes the file
rm -rvf — r-recursive f-forcefully v-verbose deletes the file
rm - -help —to known the rm related information.
```

```
[root@localhost ~]# rm -rf dir1
[root@localhost ~]# ls
anaconda-ks.cfg file10 swati
[root@localhost ~]# rm -r file10
rm: remove regular empty file 'file10'? y
[root@localhost ~]# ls
anaconda-ks.cfg swati
[root@localhost ~]#
```