

Linux Admin Commands

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Linux Commands

----> root user

\$ ---> normal user

#whoami ---> for curr. user

#who

#date

#pwd ---> print working dir

#cal

#cal 2017

#cal may 2016

#clear

to get Host (Server) Name:

#hostname (short hostname)

`#hostname -f` (fully qualified hostname)

to get IP Address:

#hostname -i (or)

#ip a (or)

#ifconfig

to get Memory details:

#free -m (RAM)

#df (HDD)

#df -h (Human Readable Format)

#df -m (File System in MB)

#du (dir usage)

process management:

#ps

#ps -ef

#ps -ef | grep 'java'

#ps -ef | grep 'mysql'

#top

to kill a process:

Syntax:

```
#kill <pid>
```

Ex:

```
#kill 1277
```

```
#kill -9 3456 (force kill)
```

to kill a process by Name:

Syntax:

```
#pkill <pname>
```

Ex:

```
#pkill java
```

```
#pkill tomcat
```

file Management:

#touch demo.txt ---> to create an empty file

#touch file{1..100}

#cat > demo.txt ---> to insert data

Hello world

good day

bye

[ctrl + d]

#cat demo.txt

#cat demo.txt > sample ---> to copy data

#cat devops >> sample ---> to append data

to List files:

#ls

#ls -i (to list inode values)

#ls -r (to list in reverse order)

#ls -t (to list by time of modify)

#ls -s (to list by size)

#ls -a (to list hidden files)

#ls -l (for long list)

#cp demo.txt sample --> to copy data

#rm demo.txt --> to remove files

#ls -l

-	rwx	rwx	rwx	1	root	root	38	Aug 19	02:04	Demo.txt
---	-----	-----	-----	---	------	------	----	--------	-------	----------

file type owner permi. group permi. others perm. no.of links owner (or) user group size modified date & time file name

File type:

- --> Regular file(txt,images,docs...)
- d --> Directory
- l --> Link File
- s --> Socket File
- c --> Char. Special File
- b --> Block Special File

Permissions

- r --> Read permi.
- w --> Write permi.
- x --> Execute permi.
- > no. permission

to Manage directries:

```
#mkdir mydir  
#mkdir dir{1..100}  
#cp sample mydir/  
#cd mydir  
#cd ..    ---> to move to parent dir  
#cd /     ---> to move to root dir  
#cd ~     ---> to move to home dir  
#cd      ---> to move to home dir  
#cd -     ---> to move to previous working dir.  
#rmdir dir1  
#rm -rf mydir  
#rm -rf *
```

Hard Link and Soft Link

Soft Link: "shortcut"

```
#ln -s demo.txt Slink
```

```
#ls -i          ---> lists diff. inode values
```

Hard Link: "replica"

```
#ln demo.txt Hlink
```

```
#ls -i          ---> lists similar inode values
```

```
#cat demo.txt
```

```
#cat SLink
```

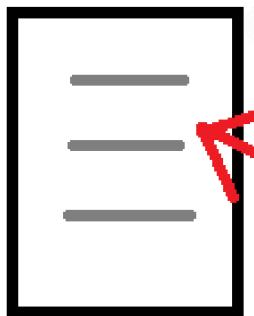
```
#rm demo.txt
```

```
#cat SLink  ---> can not access data from Slink
```

```
#cat HLink  ---> still it can access data
```

SoftLink

demo.txt



SLink

path

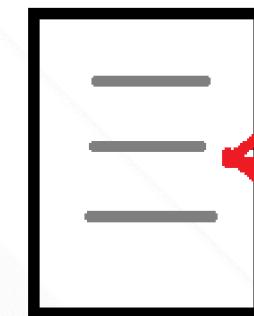
125

367

diff. inode values

HardLink

demo.txt



Hard Link

125

125

same inode values

File security

chmod :

diff. file permissions ...

Read (r)	---> 4	r & w --> 4+2 = 6
Write (w)	---> 2	r & x --> 4+1 = 5
Execute (x)	---> 1	w & x --> 2+1 = 3
No permi.	---> 0	r,w&x --> 7

Syntax-1:

#chmod [permission] <File Name>

Ex:

#chmod 421 demo.txt

#chmod 536 demo.txt

#chmod 777 demo.txt

#chmod 000 demo.txt

File security

Syntax-2 :

```
#chmod [who] [+/-/=] [permi] <File Name>
```

who

u ---> user (or) owner

g ---> group

o ---> others

+ ---> grant permi.

- ---> revoke permi.

= ---> grant a specific permi. and revoke other permi.

Ex:

```
#chmod u+r demo
```

```
#chmod g-w demo
```

```
#chmod o=x demo
```

User and Group Management

```
#sudo su -                                → to switch root user  
#sudo -i  
#cat /etc/passwd                         → to list all users  
#cat /etc/group                            → to list all groups  
#groupadd sales                           → to create a Group:  
#useradd satish                          → to create a User  
#useradd -g sales john  
#passwd satish                           → to set passwd  
  
Enter new passwd : satish  
#usermod -g sales satish    → to modify primary group  
#usermod -G finance satish   → to modify Secondary group  
#id satish  
#groupmod -n stock finance → to modify a group  
#userdel satish                      → to delete user:  
#groupdel sales                       → to delete group:
```

to change Ownership

#chown satish demo.txt ---> to chnage owner

#chgrp sales demo.txt ---> to chnage group

#chown satish:satish demo.txt

 ---> to chnage owner & group

#chown -R satish:satish mydir

WC

Syntax:

```
#wc [option] <file Name>
```

Ex:

```
#wc demo.txt
```

```
#wc -l demo.txt --> no. of Lines
```

```
#wc -w demo.txt --> no. of Words
```

```
#wc -c demo.txt --> no. of Char.s
```

```
$wc -lw demo.txt --> to count no. of lines & words
```

```
$wc -lc demo.txt --> to count no. of lines & chars
```

```
$wc -wc demo.txt --> to count no. of words&chars.
```