cp command

cp command is used to copy files and directories from one location to another.

SYNTAX:

 # cp <sourcefile name> <destination path>

 # cp <option> <source file name> <destination path>

OPTIONS:

- **-r → copy directories recursively**
- **-v →verbose**
- **-a →all attributes**
- **-p →permision**
- **-s →make symbolic links instead of copying**

EG:

[root@server ~]# **mkdir /source /destination**

[root@server ~]# **ls /**

afs data1 dir2 etc lib opt root **source** usr

bin **destination** dir3 grras lib64 proc run srv var

[root@server ~]# touch /source/test{1..5}

[root@server ~]# ls /source/

test1 test2 test3 test4 test5

[root@server ~]# **cp /source/test1 /destination/**

[root@server ~]# **ls /source/**

test1 test2 test3 test4 test5

[root@server ~]# **ls /destination/**

test1

[root@server ~]# **cp -v /source/test2 /destination/**

'/source/test2' -> '/destination/test2'

[root@server ~]# **ls /destination/**

test1 test2

[root@server ~]# **cp /source/test{3..4} /destination/** → ***copy sequence file to directory***

[root@server ~]# **ls /destination/**

test1 test2 test3 test4

[root@server ~]# **cp /source/* /destination/** → **Copy all files from /source**

cp: overwrite '/destination/test1'? y

cp: overwrite '/destination/test2'? y

cp: overwrite '/destination/test3'? y

cp: overwrite '/destination/test4'? y

[root@server ~]# **ls /destination/**

test1 test2 test3 test4 test5

[root@server ~]# cat > /source/test1

REDHAT

USER

[root@server ~]# cat /source/test1

REDHAT

USER

[root@server ~]# cat > /source/test2

SYSTEM

ADMIN

[root@server ~]# cat /source/test2

SYSTEM

ADMIN

[root@server ~]# cat /destination/test1

[root@server ~]# **touch /source/ABC{1..2}**

[root@server ~]# cat > /source/ABC1

abcfile

[root@server ~]# **ls /source/**

ABC1 ABC2 test1 test2 test3 test4 test5

[root@server **~]# ls /destination/**

test1 test2 test3 test4 test5

[root@server **~]# cp /source/* /destination/** → *Copy all files from /source*

cp: overwrite '/destination/test1'? y

cp: overwrite '/destination/test2'? y

cp: overwrite '/destination/test3'? y

cp: overwrite '/destination/test4'? y

cp: overwrite '/destination/test5'? y

overwrite prompt for all existing files

[root@server ~]# **ls /destination/**

ABC1 **ABC2** test1 test2 test3 test4 test5

New files ***Existing Files***

[root@server ~]# **cat /destination/test1**

REDHAT

USER

[root@server ~]# **cat /destination/test2**

SYSTEM

ADMIN

[root@server ~]# **cat /destination/ABC1**

abcfile

[root@server ~]# cat >> /source/test1

SYSTEM USER

[root@server ~]# **touch /source/xyz{1..2}** → *Creating new files in /source dir*

[root@server ~]# **cat > /source/xyz1**

HELLO USER

[root@server ~]# cat /source/test1

REDHAT

USER

SYSTEM USER

-n → will ignore the overwrite files(existing files)

[root@server ~]# **cp -n /source/* /destination/** → *-n will ignore the overwrite files*

[root@server ~]# **ls /destination**

ABC1 ABC2 test1 test2 test3 test4 test5 **xyz1** **xyz2**

Existing Files ***New files***

[root@server ~]# **cat /source/test1**

REDHAT

USER

SYSTEM USER

[root@server ~]# **cat /destination/test1**

REDHAT

USER

[root@server ~]# **cat /destination/xyz1**

HELLO USER

[root@server ~]# cat > red.txt

REDHAT

USER

[root@server ~]# **cat red.txt**

REDHAT

USER

[root@server ~]# **ls**

anaconda-ks.cfg Documents Music Public **red.txt** sample Videos

[root@server ~]# **cp red.txt /destination/sam.txt** → *Copy one to one file with data*

[root@server ~]# **ls /destination/**

ABC1 ABC2 **sam.txt** test1 test2 test3 test4 test5 xyz1 xyz2

[root@server ~]# **cat /destination/sam.txt**

REDHAT

USER

Copy multiple files data to sigle file

[root@server ~]# **cat > kali.txt**

KALI USER

[root@server ~]# **cat kali.txt**

KALI USER

[root@server ~]# **cat red.txt**

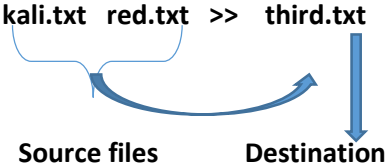
REDHAT

USER

[root@server ~]# **cp kali.txt red.txt third.txt** → *Multiple files data cannot combined in single file using cp command*

cp: target 'third.txt' is not a directory

[root@server ~]# **cat kali.txt red.txt >> third.txt** → *to combine multiple files data in single need to use **cat** command*



Source files **Destination File**

[root@server ~]# ls

anaconda-ks.cfg Documents kali.txt Pictures redhat1 sample **third.txt**

Desktop Downloads Music Public red.txt Templates Videos

[root@server ~]# **cat third.txt**

KALI USER

REDHAT **combined data**

USER

Copy multiple file to single destination directory

[root@server ~]# **touch sys.txt /apple /tmp/user.txt**

[root@server ~]# **ls . / /tmp/**

.:

anaconda-ks.cfg Documents kali.txt Pictures redhat1 sample Templates Videos

Desktop Downloads Music Public red.txt sys.txt third.txt

/:

afs boot destination dir2 dir5 home lib64 opt redhat sambadir srv usr

apple data dev dir3 etc kali media proc root sbin sys var

bin data1 dhparams.pem dir4 grras lib mnt red run source tmp web.sh

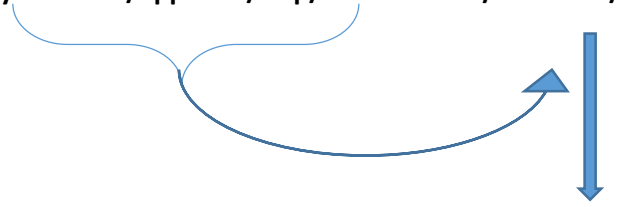
/tmp/:

class

user.txt

[root@server ~]# **mkdir /linuxdata**

[root@server ~]# **cp sys.txt /apple /tmp/user.txt /linuxdata/**



Source files **Destination directory**

[root@server ~]# **ls /linuxdata/**

apple sys.txt user.txt

[root@server ~]# **mkdir /centos**

[root@server ~]# **touch /centos/{apple{1..3},class.txt,system.txt,kali,android}**

[root@server ~]# **ls /centos/**

android apple1 apple2 apple3 class.txt kali system.txt

[root@server ~]# **cp -v /centos/*.txt /linuxdata/** → *Copy all* ***.txt*** *files*

'/centos/class.txt' -> '/linuxdata/class.txt'

'/centos/system.txt' -> '/linuxdata/system.txt'

[root@server ~]# ls /linuxdata/

apple class.txt system.txt sys.txt user.txt

[root@server ~]# **cp /centos/app* /linuxdata/** → *copy all files starting with* ***app***

[root@server ~]# ls /linuxdata/

apple apple1 apple2 apple3 class.txt system.txt sys.txt user.txt

[root@server ~]# **cp /centos/{kali,android} /linuxdata/** → *copy multiple files*

[root@server ~]# **ls /linuxdata/**

android apple apple1 apple2 apple3 class.txt kali system.txt sys.txt user.txt

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-r → Copy directory recursively

[root@server ~]# **cp /centos /linuxdata/**

cp: -r not specified; omitting directory '/centos'

[root@server ~]# **cp -rv /centos /linuxdata**

'/centos' -> '/linuxdata/centos'

'/centos/apple1' -> '/linuxdata/centos/apple1'

'/centos/apple2' -> '/linuxdata/centos/apple2'

'/centos/apple3' -> '/linuxdata/centos/apple3'

'/centos/class.txt' -> '/linuxdata/centos/class.txt'

'/centos/system.txt' -> '/linuxdata/centos/system.txt'

'/centos/kali' -> '/linuxdata/centos/kali'

'/centos/android' -> '/linuxdata/centos/android'

[root@server ~]# **ls /linuxdata/**

android apple apple1 apple2 apple3 **centos** class.txt kali system.txt sys.txt user.txt

[root@server ~]# tree /linuxdata/

/linuxdata/

├── android

├── apple

├── apple1

├── apple2

├── apple3

├── **centos**

| ├── android

| ├── apple1

| ├── apple2

| ├── apple3

| ├── class.txt

| ├── kali

| └── system.txt

├── class.txt

├── kali

├── system.txt

├── sys.txt

└── user.txt

1 directory, 17 files

[root@server ~]# **su - sushmita**

[sushmita@server ~]$ pwd

/home/sushmita

[sushmita@server ~]$ touch redhat.txt linux.txt

[sushmita@server ~]$ ll

total 0

-rw-r--r--. 1 sushmita sushmita 0 Jul 3 19:42 linux.txt

-rw-r--r--. 1 sushmita sushmita 0 Jul 3 19:42 redhat.txt

[sushmita@server ~]$ cat > redhat.txt

REDHAT USER

[sushmita@server ~]$ cat > linux.txt

linux user

[sushmita@server ~]$ **ll**

total 8

-rw-rw-r--. 1 sushmita sushmita 11 Jul 3 19:43 linux.txt

-rw-rw-r--. 1 sushmita sushmita 12 Jul 3 19:43 redhat.txt

[sushmita@server ~]$ exit

logout

[root@server ~]# **cp /home/sushmita/redhat.txt /** → *root user is copying redhat.txt from users home directory to / location*

[root@server ~]# **ls /**

afs boot dev home lib64 mnt **redhat.txt** sambadir srv usr

apple centos dhparams.pem kali linuxdata opt root sbin sys var

bin destination etc lib media proc run source tmp web.sh

[root@server ~]# **ls -l /redhat.txt**

-rw-r--r--. 1 root root 12 Jul 3 19:48 /redhat.txt → *The permission and time stamp changes according to the user who copies the file*

[root@server ~]# **cat /redhat.txt**

REDHAT USER

[root@server ~]# **su - sushmita**

[sushmita@server ~]$ ll

total 8

-rw-rw-r--. 1 sushmita sushmita 11 Jul 3 19:43 linux.txt

-rw-rw-r--. 1 sushmita sushmita 12 Jul 3 19:43 redhat.txt

[sushmita@server ~]$

[sushmita@server ~]$ **cat >> redhat.txt** → *user can edit the self file bcoz user has permission*

REDHAT CERTIFIED

[sushmita@server ~]$ **cat redhat.txt**

REDHAT USER

REDHAT CERTIFIED

[sushmita@server ~]$ **cat /redhat.txt** → *can read the /redhat.txt bcoz user has permisson*

REDHAT USER

[sushmita@server ~]$ **cat >> /redhat.txt** → *cannot edit the file copied by root user to / dir*

-bash: /redhat.txt: Permission denied

[sushmita@server ~]$ exit

logout

[root@server ~]# **ls -l /home/sushmita/**

total 132

-rw-rw-r--. 1 sushmita sushmita 11 Jul 3 19:43 linux.txt

-rw-rw-r--. 1 sushmita sushmita 29 Jul 3 19:54 redhat.txt

-a → all credentials ()

[root@server ~]# **cp -a /home/sushmita/linux.txt /**

[root@server ~]# **ls /**

afs boot dev home lib64 media proc run source tmp web.sh

apple centos dhparams.pem kali linuxdata mnt redhat.txt sambadir srv usr

bin destination etc lib **linux.txt** opt root sbin sys var

[root@server ~]# **ls -l /linux.txt**

-rw-rw-r--. 1 sushmita sushmita 11 Jul 3 19:43 /linux.txt → *permission and time stamp remains same as it is copied with option -a*

[root@server ~]# **su - sushmita**

[sushmita@server ~]$ ls

linux.txt redhat.txt

[sushmita@server ~]$ cat >> linux.txt

HELLO

[sushmita@server ~]$ **cat >> /linux.txt** → *now user can edit the file as permission remains same to destination location also*

HELLO INDIA

[sushmita@server ~]$ **cat /linux.txt**

linux user

HELLO INDIA

[sushmita@server ~]$ exit

Logout

-s → copies the data of file to new and creates symbolic link

[root@server ~]# **cat /etc/default/useradd**

useradd defaults file

GROUP=100

HOME=/home

INACTIVE=-1

EXPIRE=

SHELL=/bin/bash

SKEL=/etc/skel

CREATE_MAIL_SPOOL=yes

[root@server ~]# **cp -s /etc/default/useradd mydata.txt**

[root@server ~]# **ls**

anaconda-ks.cfg Documents kali.txt mydata.txt Public red.txt sys.txt third.txt

Desktop Downloads Music Pictures redhat1 sample Templates Videos

[root@server ~]# **cat mydata.txt**

useradd defaults file

GROUP=100

HOME=/home

INACTIVE=-1

EXPIRE=

SHELL=/bin/bash

SKEL=/etc/skel

CREATE_MAIL_SPOOL=yes

[root@server ~]# ls -l mydata.txt

lrwxrwxrwx. 1 root root 20 Jul 3 23:47 mydata.txt -> /etc/default/useradd

[root@server ~]# **stat mydata.txt**

File: mydata.txt -> /etc/default/useradd

Size: 20 Blocks: 0 IO Block: 4096 symbolic link

Device: fd00h/64768d Inode: 18649924 Links: 1

Access: (0777/lrwxrwxrwx) Uid: (0/ root) Gid: (0/ root)

Context: unconfined_u:object_r:admin_home_t:s0

Access: 2025-07-03 23:47:33.530904650 +0530

Modify: 2025-07-03 23:47:32.347904586 +0530

Change: 2025-07-03 23:47:32.347904586 +0530

Birth: 2025-07-03 23:47:32.347904586 +0530

[root@server ~]#