

RSYNC

Rsync (Remote Sync) is the most commonly used command for copying and synchronizing files and directories remotely as well as locally in Linux/Unix systems.

rsync -vr (-v =verbose, -r = copies data recursively)

```
(root@kali)~#  
# rsync -vr testingrnc vivek:/root/  
root@vivek's password:  
Permission denied, please try again.  
root@vivek's password:  
sending incremental file list  
testingrnc  
  
sent 118 bytes received 35 bytes 6.80 bytes/sec  
total size is 24 speedup is 0.16
```

Output

```
[root@vivek ~]# ls  
acl anaconda-ks.cfg crontest etc.tar.gz initial-setup-ks.cfg sudocopy  
[root@vivek ~]# ls  
acl anaconda-ks.cfg crontest etc.tar.gz initial-setup-ks.cfg sudocopy testingrnc  
[root@vivek ~]#
```

. =dot synchronize all data copy

```
(root@kali)~#  
# rsync -vr . vivek:/root/  
root@vivek's password:  
sending incremental file list  
skipping non-regular file ".face.icon"  
.bashrc  
.bashrc.original  
.face  
.profile  
.viminfo  
.zsh_history  
.zshrc  
192.168.254.135  
testing
```

Output

```
[root@vivek ~]# ls  
acl anaconda-ks.cfg crontest etc.tar.gz initial-setup-ks.cfg sudocopy  
[root@vivek ~]# ls  
192.168.254.135 acl anaconda-ks.cfg crontest etc.tar.gz initial-setup-ks.cfg sudocopy testing testingrnc  
[root@vivek ~]#
```

Copy /sync tar file

```
[root@vivek ~]# rsync -zvh etc.tar.gz /home  
etc.tar.gz  
  
sent 7.03M bytes received 35 bytes 4.69M bytes/sec  
total size is 7.09M speedup is 1.01
```

Output

```
[root@vivek ~]# cd /home  
[root@vivek home]# ls  
etc.tar.gz p pvg vg vgandhi vivek  
[root@vivek home]#
```

RSYNC

Copy /sync directory and subdirectory

```
[root@vivek ~]# rsync -avzh sudocopy /home
sending incremental file list
sudocopy/
sudocopy/sudoers

sent 2.07K bytes  received 39 bytes  4.22K bytes/sec
total size is 4.33K  speedup is 2.05
```

Output

```
[root@vivek ~]# cd /home
[root@vivek home]# ls
p  pvg  sudocopy  vg  vgandhi  vivek
[root@vivek home]# cd sudocopy/
[root@vivek sudocopy]# ls
sudoers
[root@vivek sudocopy]#
```

Copy /sync directory and subdirectory on remote

```
(root@kali)~[~]
# rsync -avzh rsync vivek:/root/
root@vivek's password:
sending incremental file list
rsync/
rsync/1
rsync/2
rsync/3

sent 221 bytes  received 77 bytes  45.85 bytes/sec
total size is 0  speedup is 0.00
```

Output

```
[root@vivek sudocopy]# cd /root
[root@vivek ~]# ls
192.168.254.135  acl  anaconda-ks.cfg  crontest  etc.tar.gz  initial-setup-ks.cfg  p  pvg  rsync  s
[root@vivek ~]# cd rsync/
[root@vivek rsync]# ls
1 2 3
[root@vivek rsync]#
```

Copy a file from a remote server to a local server with SSH

```
(root@kali)~[~]
# rsync -avzh ssh ssh vivek:/root/
root@vivek's password:
sending incremental file list
ssh/
ssh/testt

sent 125 bytes  received 39 bytes  19.29 bytes/sec
total size is 0  speedup is 0.00
```

OUTPUT

```
(root@vivek)~[~]
# ls
acl  anaconda-ks.cfg  etc.tar.gz  initial-setup-ks.cfg  ssh  sudocopy  testingrnc
```

RSYNC

TO SHOW THE PROGRESS WHILE TRANSFERRING THE DATA

```
(root@kali)-[~]
# rsync -avzhe ssh --progress /root/permission vivek:/root/
root@vivek's password:
sending incremental file list
permission/
permission/etc/
permission/etc/.pwd.lock
      0 100%  0.00kB/s   0:00:00 (xfr#1, ir-chk=1259/1262)
permission/etc/adduser.conf
    2.98K 100%  0.00kB/s   0:00:00 (xfr#2, ir-chk=1258/1262)
permission/etc/adjtime
      44 100% 42.97kB/s   0:00:00 (xfr#3, ir-chk=1257/1262)
permission/etc/bash.bashrc
    1.99K 100%  1.90MB/s   0:00:00 (xfr#4, ir-chk=1256/1262)
permission/etc/bash_completion
      45 100% 43.95kB/s   0:00:00 (xfr#5, ir-chk=1255/1262)
```

Rsync set bandwidth limit and transfer file

Normally command run then output check the speed

```
sent 435.85K bytes  received 24.58K bytes  61.39K bytes/sec
total size is 7.19M  speedup is 15.61
```

After bandwidth limit set

```
(root@kali)-[~]
# rsync --bwlimit=1000 -avzhe ssh permission vivek:/root/
root@vivek's password:
sending incremental file list
permission/
```

Limit set output check speed

```
sent 2.66M bytes  received 31.11K bytes  359.41K bytes/sec
total size is 7.19M  speedup is 2.67
```

Use of -include option To Specify permission check

```
(root@kali)-[~]
# rsync -avh --include-from=permission vivek:/root/
root@vivek's password:
receiving incremental file list
dr-xr-x---      4.10K 2022/02/18 02:28:11 .
-rw-----     12.63K 2022/02/18 01:20:08 .bash_history
-rw-r--r--      18 2018/08/12 13:51:50 .bash_logout
-rw-r--r--     176 2018/08/12 13:51:50 .bash_profile
-rw-r--r--     5.35K 2022/02/18 00:57:45 .bashrc
-rw-r--r--     571 2022/02/18 00:57:45 .bashrc.original
-rw-r--r--     100 2018/08/12 13:51:50 .cshrc
-rw-----      16 2022/02/06 04:17:56 .esd_auth
-rw-r--r--    11.66K 2022/02/18 00:57:45 .face
```

RSYNC

Use of -delete option

Before use delete command list of current server

```
(root@kali)~# ls
192.168.254.135 permission test
```

Client server list

```
(root@vivek)~# ls
anaconda-ks.cfg etc.tar.gz initial-setup-ks.cfg sudocopy testingrnc
```

After command execute deleting current all files & all directory and copy to all files and directory in vivek:/root file to current system

```
(root@kali)~# rsync -avz --delete vivek:/root/ .
root@vivek's password:
receiving incremental file list
deleting test/
deleting permission/etc/zsh/zshrc
deleting permission/etc/zsh/zshenv
deleting permission/etc/zsh/zprofile.original
deleting permission/etc/zsh/zprofile
deleting permission/etc/zsh/zlogout
deleting permission/etc/zsh/zlogin
deleting permission/etc/zsh/newuser.zshrc.recommended.original
deleting permission/etc/zsh/newuser.zshrc.recommended
deleting permission/etc/zsh/
deleting permission/etc/xl2tpd/xl2tpd.conf
```

Output current server list files and directory

```
(root@kali)~# ls
anaconda-ks.cfg etc.tar.gz initial-setup-ks.cfg sudocopy testingrnc
```