Server-side configuration

Make sure repo create new for server side.

```
Install vsftpd
[root@vivek ~]# yum -y install vsftpd
```

```
Configure vsftpd
[root@vivek ftp]# vi /etc/vsftpd/vsftpd.conf
```

```
# Allow anonymous FTP? (Beware - allowed by default if you comment this out).
anonymous_enable=YES
#
```

```
# When SELinux is enforcing check for SE bool ftp_home_dir
local_enable=YES
#
```

```
# Uncomment this to enable any form of FTP write command.
write_enable=YES
#
```

```
# Make sure PORT transfer connections originate from port 20 (ftp-data).
connect_from_port_20=YES
#
```

```
# the user does not have write access to the top level directory within the
# chroot)
#chroot_local_user=YES
#chroot_list_enable=YES
# (default follows)
#chroot_list_file=/etc/vsftpd/chroot_list
#
```

Add file enable manually port

```
pasv_enable=yes
pasv_max_port=64000
pasv_min_port=64321
```

```
Restart the vsftpd service
```

```
[root@vivek ~]# systemctl restart vsftpd
```

Allow vsftpd Through the Firewall

Allow the default FTP port, port 21, through firewalld

[root@vivek ~]# firewall-cmd --permanent --add-port=21/tcp
success

reload the firewall

[root@vivek ~]# firewall-cmd --reload success

```
[root@vivek /] # firewall-cmd --permanent --add-port=20/tcp success
[root@vivek /] # firewall-cmd --reload success
```

```
[root@vivek ~]# firewall-cmd --zone=public --permanent --add-service=ftp
success
[root@vivek ~]# firewall-cmd --reload
success
[root@vivek ~]# firewall-cmd --list-services
cockpit dhcpv6-client ftp ssh
[root@vivek ~]# firewall-cmd --permanent --zone=public --add-port=64000-64321/tcp
success
[root@vivek ~]# firewall-cmd --reload
success
[root@vivek ~]# firewall-cmd --reload
success
[root@vivek ~]#
```

DOWNLOAD FILE MEANS: - SERVER TO CLIENT SIDE TRANSFER TO COPY FILES

UPLOAD FILE MEANS :- CLIENT TO SEVER SIDE TRANSFER TO COPY FILE

Enable to selinux in server

```
Selinux status check
[root@vivek ~] # sestatus
SELinux status:
                               enabled
                               /sys/fs/selinux
SELinuxfs mount:
SELinux root directory:
                               /etc/selinux
Loaded policy name:
                               targeted
Current mode:
                               enforcing
Mode from config file:
                               enforcing
Policy MLS status:
                               enabled
                             allowed
Policy deny unknown status:
Memory protection checking:
                               actual (secure)
Max kernel policy version:
                              31
```

Check the Booleans for ftp

```
[root@vivek ~]# getsebool -a |grep ftp
Error getting active value for -a
[root@vivek ~]# getsebool -a |grep ftp
ftpd_anon_write --> off
ftpd_connect_all_unreserved --> off
ftpd_connect_db --> off
ftpd_full_access --> off
ftpd_full_access --> off
ftpd_use_cifs --> off
ftpd_use_fusefs --> off
ftpd_use_nfs --> off
ftpd_use_passive_mode --> off
httpd_can_connect_ftp --> off
httpd_enable_ftp_server --> off
ftpt_non_write --> off
ftpt_home_dir --> off
```

```
allow ftpd anon write Boolean value as "on"
[root@vivek ~] # setsebool -P allow ftpd anon write on
[root@vivek ~]#
[root@vivek ~] # getsebool -a |grep ftp
ftpd anon write --> on
ftpd connect all unreserved --> off
ftpd connect db --> off
ftpd full access --> off
ftpd use cifs --> off
ftpd use fusefs --> off
ftpd use nfs --> off
ftpd use passive mode --> off
httpd can connect ftp --> off
httpd_enable_ftp_server --> off
tftp_anon_write --> off
tftp home dir --> off
```

Client-Side Setup

Install ip table

[root@pooja /]# yum install iptables-services

Undating Subscription Management repositories

```
[root@pooja /]# systemctl enable iptables
Created symlink /etc/systemd/system/basic.target.wants/iptables.service → /usr/lib/systemd/system/iptables.service.
[root@pooja /]# systemctl enable ip6tables.service
 reated symlink /etc/systemd/system/basic.target.wants/ip6tables.service -> /usr/lib/systemd/system/ip6tables.service
 root@pooja /]# systemctl start iptables.service
[root@pooja /]# systemctl enable iptables
Created symlink /etc/systemd/system/basic.target.wants/iptables.service <math>	o /usr/lib/systemd/system/ipta
[root@pooja /]# systemctl enable ip6tables.service
Created symlink /etc/systemd/system/basic.target.wants/ip6tables.service → /usr/lib/systemd/system/ip6
[root@pooja /]# systemctl start iptables
[root@pooja /]# systemctl start ip6tables.service
[root@pooja /]# systemctl status iptables
• iptables.service - IPv4 firewall with iptables
    Loaded: loaded (/usr/lib/systemd/system/iptables.service; enabled; vendor preset: disabled)
Active: active (exited) since Tue 2022-02-22 05:33:50 EST; 2min 0s ago
 Main PID: 3652 (code=exited, status=0/SUCCESS)
    Memory: 0B
    CGroup: /system.slice/iptables.service
Feb 22 05:33:50 pooja.gandhi.com systemd[1]: Starting IPv4 firewall with iptables...
Feb 22 05:33:50 pooja.gandhi.com iptables.init[3652]: iptables: Applying firewall rules: [ OK ] Feb 22 05:33:50 pooja.gandhi.com systemd[1]: Started IPv4 firewall with iptables.
[root@pooja /]# systemctl status ip6tables.service
• ip6tables.service - IPv6 firewall with ip6tables
Loaded: loaded (/usr/lib/systemd/system/ip6tables.service; enabled; vendor preset: disabled)
Active: active (exited) since Tue 2022-02-22 05:35:40 EST; 16s ago
  Process: 3764 ExecStart=/usr/libexec/iptables/ip6tables.init start (code=exited, status=0/SUCCESS)
 Main PID: 3764 (code=exited, status=0/SUCCESS)
Feb 22 05:35:40 pooja.gandhi.com systemd[1]: Starting IPv6 firewall with ip6tables...
Feb 22 05:35:40 pooja.gandhi.com ip6tables.init[3764]: ip6tables: Applying firewall rules: [ OK ] Feb 22 05:35:40 pooja.gandhi.com systemd[1]: Started IPv6 firewall with ip6tables.
```

[root@pooja /]# vim /etc/sysconfig/iptables

```
# sample configuration for iptables service
# you can edit this manually or use system-config-firewall
# please do not ask us to add additional ports/services to this default configuration
*filter
:INPUT ACCEPT [0:0]
:FORWARD ACCEPT [0:0]
:OUTPUT ACCEPT [0:0]
-A INPUT -m state --state RELATED, ESTABLISHED -j ACCEPT
-A INPUT -p icmp -j ACCEPT
-A INPUT -i lo -j ACCEPT
-A INPUT -b tcp -m state --state NEW -m tcp --dport 22 -j ACCEPT
-A INPUT -j REJECT --reject-with icmp-host-prohibited
-A FORWARD -j REJECT --reject-with icmp-host-prohibited
-A INPUT -m state --state NEW -m tcp --dport 21 -j ACCEPT
COMMIT
```

[root@pooja /]# systemctl restart iptables
Job for iptables.service failed because the control process exited with error code.
See "systemctl status iptables.service" and "journalctl -xe" for details.
[root@pooja /]# systemctl restart ip6tables

To connect to ftp server

```
[root@pooja pub] # ftp vivek
Connected to vivek (192.168.254.133).
220 (vsFTPd 3.0.3)
Name (vivek:root): ftp
331 Please specify the password.
Password:
230 Login successful.
```

LIST DIRECTORY CLIENT SYSTEM

```
Using binary mode to transfer files.

ftp> ls

227 Entering Passive Mode (192,168,254,133,254,94).

150 Here comes the directory listing.

drwxr-xr-x 3 0 0 19 Feb 22 10:16 pub

226 Directory send OK.
```

CHANGE SERVER DIRECTORY TO ENTER SERVER SYSTEM

```
ftp> cd pub
250 Directory successfully changed.
```

```
LIST SERVER SYSTEM DIRECTORY
```

```
ftp> 1s

227 Entering Passive Mode (192,168,254,133,252,48).

150 Here comes the directory listing.

-rw-r--r-- 1 0 0 0 Feb 22 11:56 1

-rw-r--r-- 1 0 0 0 Feb 22 11:56 2

-rw-r--r-- 1 0 0 0 Feb 22 11:56 3

drwxr-xr-x 7 0 0 225 Feb 06 09:05 red8v

-rw-r--r-- 1 0 0 Feb 22 11:56 test

226 Directory send OK.
```

To download files use ftp> get test local: test remote: test 227 Entering Passive Mode (192,168,254,133,251,221). 150 Opening BINARY mode data connection for test (0 bytes). 226 Transfer complete.

```
!ls means current directory list check client system

ftp> !ls
rhel82 test testftp

ftp> bye
221 Goodbye.
[root@pooja pub] # ll
total 0
drwxr-xr-x. 7 root root 225 Feb 22 03:28 rhel82
-rw-r--- 1 root root 0 Feb 22 06:57 test
-rwxrwxrwx 1 root_root 0 Feb 22 05:16 testftp
```

Execute command use mget for multiple file copy

```
Client-side listing files before running mget command
[root@pooja pub]# 11
total 0
drwxr-xr-x. 7 root root 225 Feb 22 03:28 rhe182
-rwxrwxrwx 1 root root 0 Feb 22 05:16 testftp
[root@pooja pub]# ftp vivek
```

```
To connect to ftp server

[root@pooja pub] # ftp vivek
Connected to vivek (192.168.254.133).
220 (vsFTPd 3.0.3)
Name (vivek:root): ftp
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> ls
227 Entering Passive Mode (192,168,254,133,252,68).
150 Here comes the directory listing.
drwxr-xr-x 3 0 0 71 Feb 22 12:20 pub
226 Directory send OK.
```

```
Change client to server directory
ftp> cd pub
250 Directory successfully changed.
ftp> ls
227 Entering Passive Mode (192,168,254,133,251,181).
150 Here comes the directory listing.
drwxr-xr-x 7 0
                                      225 Feb 06 09:05 red8v
-rw-r--r--
            1 0
                                       0 Feb 22 12:20 test1
-rw-r--r--
            1 0
                                       0 Feb 22 12:20 test2
-rw-r--r--
                                       0 Feb 22 12:20 test3
-rw-r--r--
            1 0
                                       0 Feb 22 12:20 test4
226 Directory send OK.
```

To download files for multiple files for mget command

```
ftp> mget test*
mget test1? y
227 Entering Passive Mode (192,168,254,133,252,240).
150 Opening BINARY mode data connection for test1 (0 bytes).
226 Transfer complete.
mget test2? y
227 Entering Passive Mode (192,168,254,133,255,69).
150 Opening BINARY mode data connection for test2 (0 bytes).
226 Transfer complete.
mget test3? y
227 Entering Passive Mode (192,168,254,133,252,84).
150 Opening BINARY mode data connection for test3 (0 bytes).
226 Transfer complete.
mget test4? y
227 Entering Passive Mode (192,168,254,133,255,17).
150 Opening BINARY mode data connection for test4 (0 bytes).
226 Transfer complete.
ftp> !ls
rhel82 test1 test2 test3 test4 testftp
ftp> bye
221 Goodbye.
```

Output in client system

```
[root@pooja pub] # 11

total 0

drwxr-xr-x. 7 root root 225 Feb 22 03:28 rhe182

-rw-r--r- 1 root root 0 Feb 22 07:24 test1

-rw-r--r- 1 root root 0 Feb 22 07:24 test2

-rw-r--r- 1 root root 0 Feb 22 07:24 test3

-rw-r--r- 1 root root 0 Feb 22 07:24 test4

-rwxrwxrwx 1 root root 0 Feb 22 07:24 test4

[root@pooja pub] #
```

How to upload the files

```
Change permission directory in server side
[root@vivek ftp]# mkdir vivek
[root@vivek ftp]# ls
[root@vivek ftp]# chgrp ftp vivek
[root@vivek ftp]# 11
total 0
drwxr-xr-x. 3 root root 71 Feb 22 08:23 pub
drwxr-xr-x. 2 root ftp 6 Feb 22 08:23 vivek
[root@vivek ftp]#
[root@vivek ftp]# chmod g+w vivek
[root@vivek ftp]# 11
total 0
drwxr-xr-x. 3 root root 71 Feb 22 08:23 pub
drwxrwxr-x. 2 root ftp 6 Feb 22 08:23 vivek
[root@vivek ftp]#
[root@vivek ftp]#
[root@vivek ftp]# systemctl restart vsftpd
```

to configuration file and change the following attributes in server side

[root@vivek ftp]# vi /etc/vsftpd/vsftpd.conf

```
# When SELinux is enforcing check for SE bool allow_ftpd_anon_write, allow_ft
anon_upload_enable=YES
#
# Uncomment this if you want the anonymous FTP user to be able to create
# new directories.
anon_mkdir_write_enable=YES
#
```

```
[root@vivek ftp]# systemctl restart vsftpd
```

Connect client-side ftp command

```
[root@pooja pub] # ftp vivek
Connected to vivek (192.168.254.133).
220 (vsFTPd 3.0.3)
Name (vivek:root): ftp
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
```

```
Before put command list of server side
```

```
[root@vivek /] # cd /var/ftp/vivek
[root@vivek vivek] # ls
ftpupload
```

```
Check ftp list and change directory client to server

ftp> ls
227 Entering Passive Mode (192,168,254,133,252,241).
150 Here comes the directory listing.
drwxr-xr-x 3 0 0 71 Feb 22 13:23 pub
drwxrwxr-x 2 0 50 23 Feb 22 13:41 vivek
226 Directory send OK.
ftp> cd vivek
250 Directory successfully changed.
ftp> !ls
rhel82 test1 test2 test3 test4 testftp
```

```
Using put command to copy client to server files

ftp> put testftp
local: testftp remote: testftp
227 Entering Passive Mode (192,168,254,133,252,132).
150 Ok to send data.
226 Transfer complete.
ftp> ls
227 Entering Passive Mode (192,168,254,133,253,144).
150 Here comes the directory listing.
-rw-r--r- 1 0 0 0 Feb 22 13:41 ftpupload
-rw----- 1 14 50 0 Feb 22 13:55 testftp
226 Directory send OK.
```

```
Check server-side file copy or not

[root@vivek ftp]# cd vivek
[root@vivek vivek]# 11

total 0

-rw-r----. 1 root root 0 Feb 22 08:41 ftpupload

-rw-----. 1 ftp ftp 0 Feb 22 08:55 testftp
```

How to upload the multiple files

```
Check server files list

[root@vivek ~] # cd /var/ftp/vivek

[root@vivek vivek] # 11

total 0

-rw-r--r-. 1 root root 0 Feb 22 08:41 ftpupload

-rw-----. 1 ftp ftp 0 Feb 22 08:55 testftp
```

```
Connect client-side ftp command
[root@pooja pub] # ftp vivek
Connected to vivek (192.168.254.133).
220 (vsFTPd 3.0.3)
Name (vivek:root): ftp
331 Please specify the password.
Password:
230 Login successful.
```

Check ftp list and change directory client to server Remote system type is UNIX. Using binary mode to transfer files. ftp> ls 227 Entering Passive Mode (192,168,254,133,253,6). 150 Here comes the directory listing. 3 0 drwxr-xr-x 71 Feb 22 13:23 pub 38 Feb 22 13:55 vivek drwxrwxr-x 2 0 226 Directory send OK. ftp> !ls rhel82 test1 test2 test3 test4 testftp ftp> cd vivek 250 Directory successfully changed. ftp> ls 227 Entering Passive Mode (192,168,254,133,251,214). 150 Here comes the directory listing. -rw-r--r-- 1 0 -rw----- 1 14 0 Feb 22 13:41 ftpupload 0 Feb 22 13:55 testftp 226 Directory send OK.

out command for multiple copy file client to server system

ftp> mput test1 test2 test3 test4 mput test1? y 227 Entering Passive Mode (192,168,254,133,255,250). 150 Ok to send data. 226 Transfer complete. mput test2? y 227 Entering Passive Mode (192,168,254,133,251,152). 150 Ok to send data. 226 Transfer complete. mput test3? y 227 Entering Passive Mode (192,168,254,133,252,88). 150 Ok to send data. 226 Transfer complete. mput test4? y 227 Entering Passive Mode (192,168,254,133,252,214). 150 Ok to send data. 226 Transfer complete. ftp> ls 227 Entering Passive Mode (192,168,254,133,253,191). 150 Here comes the directory listing. 0 Feb 22 13:41 ftpupload 0 Feb 22 14:24 test1 1 14 0 Feb 22 14:24 test2

0 Feb 22 14:24 test3

0 Feb 22 13:55 testftp

```
Check server side putting all files copy or not
[root@vivek ~]# cd /var/ftp/vivek
[root@vivek vivek]# 11
total 0
-rw-r--r-. 1 root root 0 Feb 22 08:41 ftpupload
-rw-----. 1 ftp ftp 0 Feb 22 08:55 testftp
[root@vivek vivek]#
[root@vivek vivek]# 11
total 0
-rw-r--r-. 1 root root 0 Feb 22 08:41 ftpupload
-rw------ 1 ftp ftp 0 Feb 22 09:24 test1
-rw----- 1 ftp ftp 0 Feb 22 09:24 test2
-rw----- 1 ftp ftp 0 Feb 22 09:24 test3
-rw----- 1 ftp ftp 0 Feb 22 09:24 test4
-rw----- 1 ftp ftp 0 Feb 22 08:55 testftp
[root@vivek vivek]#
```

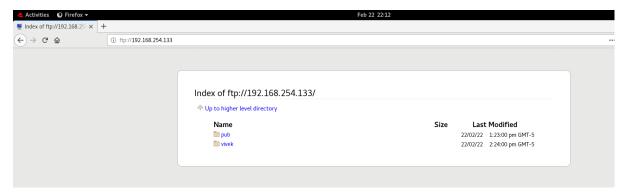
1 14

1 14

226 Directory send OK.

To use graphically target

Open Firefox



How to set up user base authentication

To allow only specify user access

First create new user in sever side

[root@vivek ~]# useradd vg

Create password

[root@vivek ~]# passwd vg

Change configuration file in server

```
# Allow anonymous FTP? (Beware - allowed by default if you comment this out).
anonymous_enable=NO
```

```
[root@vivek vsftpd]# systemctl restart vsftpd
```

Check another user allow or not

```
[root@pooja ~]# ftp vivek
Connected to vivek (192.168.254.133).
220 (vsFTPd 3.0.3)
Name (vivek:root): ftp
331 Please specify the password.
Password:
530 Login incorrect.
Login failed.
ftp>
```

Then checked particular user access name and passwd

```
[root@pooja ~]# ftp vivek
Connected to vivek (192.168.254.133).
220 (vsFTPd 3.0.3)
Name (vivek:root): vg
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp>
```

Then I change particular user access deny

Changed configuration file full access all user in server

```
[root@vivek ~]# cd /etc/vsftpd/
[root@vivek vsftpd]# ls
ftpusers user_list vsftpd.conf vsftpd_conf_migrate.sh
[root@vivek vsftpd]# vim vsftpd_
```

```
# Allow anonymous FTP? (Beware - allowed by default if you comment this out).
anonymous_enable=yes
```

Then changed configuration file in block specify user access

```
[root@vivek etc]# cd v
vmware-tools/ vsftpd/
[root@vivek etc]# cd vsftpd/
[root@vivek vsftpd]# ls
ftpusers user_list vsftpd.conf vsftpd_conf_migrate.sh
[root@vivek vsftpd]# vim user_list
```

Block user in file

root@vivek:/etc/vsftpd

```
# vsftpd userlist
# If userlist_deny=No, only allow users in this file
# If userlist_deny=YES (default), never allow users in this file, and
# do not even prompt for a password.
# Note that the default vsftpd pam config also checks /etc/vsftpd/ftpusers
# for users that are denied.
root
bin
daemon
adm
lp
sync
shutdown
halt
mail
news
uucp
operator
games
nobody
vg
```

Then check vg user can access or not [root@pooja ~] # ftp vivek Connected to vivek (192.168.254.133). 220 (vsFTPd 3.0.3) Name (vivek:root): vg 530 Permission denied. Login failed. ftp>

Check another user can access or not

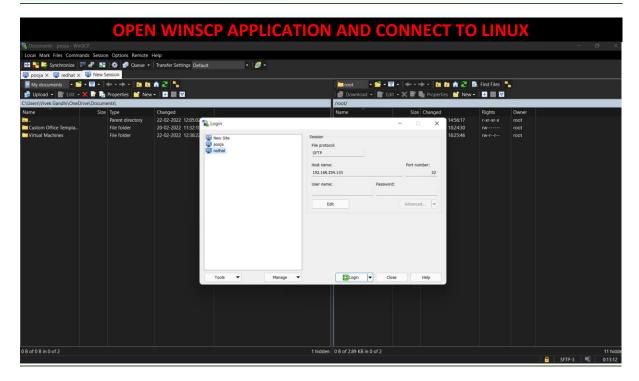
```
[root@pooja ~]# ftp vivek
Connected to vivek (192.168.254.133).
220 (vsFTPd 3.0.3)
Name (vivek:root): ftp
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp>
```

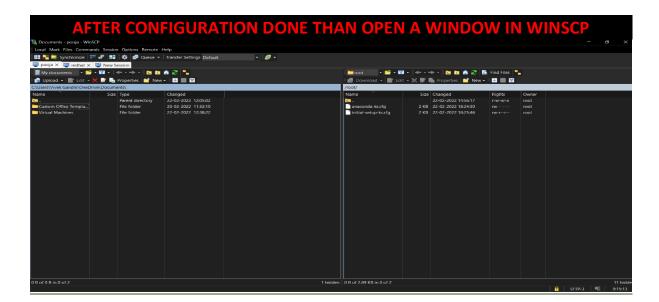


FTP USE IN FIREZILLA APPLICATION IN CLIENT SIDE

FILEZILLA is open-source application to upload and download files to the FTP server.

IN CASE APPLICATION NOT FOUND IN LINUX REDHAT SYSTEM TO FIRST INSTALL APPLICATION THAN TRANSFER WINDOWS TO LINUX SYSTEM WINSCP THROUGH.



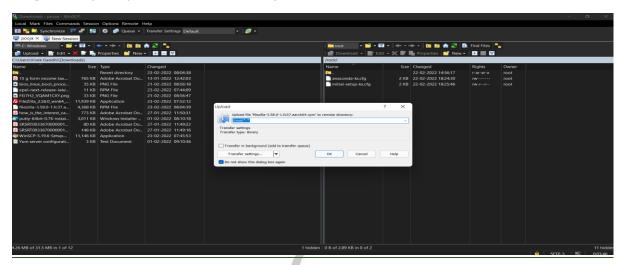


TRANSFER TO WINDOWS TO LINUX WINSCP THROUGH

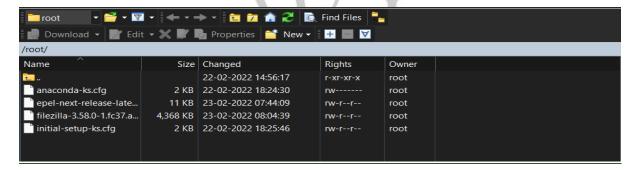
Brows path in windows system



Drag and drop or upload click file in Linux system and click ok



Check file is transfer successfully



Check Linux system file was transfer or not

Copy rpm application to /var/ftp/pub/rehl82/

```
anaconda-ks.cfg epel-next-release-latest-8.noarch.rpm filezilla-3.58.0-1.fc37.aarch64.rpm initial-setup-ks.cfg [root@pooja ~] # cp -rpv epel-next-release-latest-8.noarch.rpm /var/ftp/pub/rhe182/
'epel-next-release-latest-8.noarch.rpm' -> '/var/ftp/pub/rhe182/epel-next-release-latest-8.noarch.rpm'
[root@pooja ~] # cp -rpv filezilla-3.58.0-1.fc37.aarch64.rpm /var/ftp/pub/rhe182/
'filezilla-3.58.0-1.fc37.aarch64.rpm' -> '/var/ftp/pub/rhe182/filezilla-3.58.0-1.fc37.aarch64.rpm'
```

First update repo list than Install application