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# Experiment 9

## Aim:

To configure Linux FTP server using VSFTPD.
1. Set up anonymous access of FTP server.
2. Enable individual logins and add FTP users with Read- only access.
3. Transfer Files.

**Installing the package: vsftpd**

```
osboxes@osboxes: ~
osboxes@osboxes:~$ sudo apt-get install vsftpd
[sudo] password for osboxes:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
  vsftpd
0 upgraded, 1 newly installed, 0 to remove and 64 not upgraded.
Need to get 111 kB of archives.
After this operation, 361 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu/ trusty-updates/main vsftpd amd64 3.0.
2-1ubuntu2.14.04.1 [111 kB]
Fetched 111 kB in 1s (72.4 kB/s)
Preconfiguring packages ...
Selecting previously unselected package vsftpd.
(Reading database ... 167462 files and directories currently installed.)
Preparing to unpack .../vsftpd_3.0.2-1ubuntu2.14.04.1_amd64.deb ...
Unpacking vsftpd (3.0.2-1ubuntu2.14.04.1) ...
Processing triggers for man-db (2.6.7.1-1ubuntu1) ...
Processing triggers for ureadahead (0.100.0-16) ...
ureadahead will be reprofiled on next reboot
Setting up vsftpd (3.0.2-1ubuntu2.14.04.1) ...
vsftpd start/running, process 2578
Processing triggers for ureadahead (0.100.0-16) ...
osboxes@osboxes:~$
```

**Changing directory towards etc folder and to edit the vsftpd config file**

```
osboxes@osboxes:~$ sudo su
[sudo] password for osboxes:
Sorry, try again.
[sudo] password for osboxes:
root@osboxes:/home/osboxes# cd /etc
root@osboxes:/etc# nano vsftpd.conf
root@osboxes:/etc# nano vsftpd.conf
```

**Making the anonymous_enable from NO → YES**

**Commenting out the line local_enable**

**Uncommenting out the line write_enable**

**Saving the changes by → ctrl+O and hitting enter**

**Exiting by → ctrl+X**

```
root@osboxes: /etc

GNU nano 2.2.6              File: vsftpd.conf

anonymous_enable=YES
#
# Uncomment this to allow local users to log in.
#local_enable=YES
#
# Uncomment this to enable any form of FTP write command.
write_enable=YES
#
# Default umask for local users is 077. You may wish to change this to 022,
# if your users expect that (022 is used by most other ftpd's)
#local_umask=022
#
# Uncomment this to allow the anonymous FTP user to upload files. This only
# has an effect if the above global write enable is activated. Also, you will
# obviously need to create a directory writable by the FTP user.
#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


^G Get Help   ^O WriteOut   ^R Read File  ^Y Prev Page  ^K Cut Text   ^C Cur Pos
^X Exit       ^J Justify    ^W Where Is   ^V Next Page  ^U UnCut Text ^T To Spell
```

**Restarting the vsftpd service → service vsftpd restart & Using netstat to check the working of ftp protocol service**

```
root@osboxes:/etc# cd ..
root@osboxes:/# service vsftpd restart
vsftpd stop/waiting
vsftpd start/running, process 3184
root@osboxes:/# netstat -an|grep tcp
tcp        0      0 0.0.0.0:21              0.0.0.0:*               LISTEN
tcp        0      0 127.0.1.1:53            0.0.0.0:*               LISTEN
tcp        0      0 127.0.0.1:631           0.0.0.0:*               LISTEN
tcp        0      0 10.0.2.15:58296         172.217.174.67:443      TIME_WAIT
tcp        0      0 10.0.2.15:39296         34.98.75.36:443         TIME_WAIT
tcp        0      0 10.0.2.15:36510         34.107.221.82:80        TIME_WAIT
tcp        0      0 10.0.2.15:35714         104.18.165.34:443       TIME_WAIT
tcp        0      0 10.0.2.15:53022         52.84.46.134:443        TIME_WAIT
tcp        0      0 10.0.2.15:36304         157.240.16.52:443       ESTABLISHED
tcp        0      0 10.0.2.15:36280         117.18.237.29:80        TIME_WAIT
tcp        0      0 10.0.2.15:41474         142.250.192.68:443      TIME_WAIT
tcp        0      0 10.0.2.15:41446         142.250.192.68:443      TIME_WAIT
tcp        0      0 10.0.2.15:36312         157.240.16.52:443       ESTABLISHED
tcp        0      0 10.0.2.15:57500         172.217.160.163:443     TIME_WAIT
tcp        0      0 10.0.2.15:52488         13.227.214.21:443       ESTABLISHED
tcp        0      0 10.0.2.15:33576         34.215.36.246:443       ESTABLISHED
tcp        0      0 10.0.2.15:43276         142.250.183.110:443     TIME_WAIT
tcp        0      0 10.0.2.15:46542         35.244.181.201:443      ESTABLISHED
tcp        0      0 10.0.2.15:39320         13.227.166.120:443      TIME_WAIT
tcp        0      0 10.0.2.15:36576         172.217.160.202:443     TIME_WAIT
tcp        0      0 10.0.2.15:35668         104.18.165.34:443       TIME_WAIT
root@osboxes:/#
```

**Using ifconfig to get the IP address of the ubuntu system**

**My IP address is: 127.0.0.1**

```
root@osboxes:/# ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:ba:62:88
          inet addr:10.0.2.15  Bcast:10.0.2.255  Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:feba:6288/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:14954 errors:0 dropped:0 overruns:0 frame:0
          TX packets:3663 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:19378506 (19.3 MB)  TX bytes:347745 (347.7 KB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:808 errors:0 dropped:0 overruns:0 frame:0
          TX packets:808 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1
          RX bytes:113938 (113.9 KB)  TX bytes:113938 (113.9 KB)

root@osboxes:/#
```

**Connecting my ip address with ftp and login as anonymous**

```
root@osboxes:/# ftp 127.0.0.1
Connected to 127.0.0.1.
220 (vsFTPd 3.0.2)
Name (127.0.0.1:osboxes): anonymous
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> pwd
257 "/"
ftp> bye
221 Goodbye.
root@osboxes:/#
```

**Making the config file as it is**

```
       root@osboxes: /etc
  GNU nano 2.2.6              File: vsftpd.conf

#
# Allow anonymous FTP? (Disabled by default)
anonymous_enable=NO
#
# Uncomment this to allow local users to log in.
local_enable=YES
#
# Uncomment this to enable any form of FTP write command.
#write_enable=YES
#
# Default umask for local users is 077. You may wish to change this to 022,
# if your users expect that (022 is used by most other ftpd's)
#local_umask=022
#
# Uncomment this to allow the anonymous FTP user to upload files. This only
# has an effect if the above global write enable is activated. Also, you will
# obviously need to create a directory writable by the FTP user.
#anon_upload_enable=YES
#

^G Get Help   ^O WriteOut   ^R Read File ^Y Prev Page ^K Cut Text  ^C Cur Pos
^X Exit       ^J Justify    ^W Where Is  ^V Next Page ^U UnCut Text^T To Spell
```

# Now, adding a user

```
root@osboxes:/# adduser jainish
Adding user `jainish' ...
Adding new group `jainish' (1001) ...
Adding new user `jainish' (1001) with group `jainish' ...
Creating home directory `/home/jainish' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for jainish
Enter the new value, or press ENTER for the default
        Full Name []: jainish
        Room Number []: 25
        Work Phone []: 1
        Home Phone []: 0
        Other []: 0
Is the information correct? [Y/n] y
root@osboxes:/#
```

```
root@osboxes:/# ftp 127.0.0.1
Connected to 127.0.0.1.
220 (vsFTPd 3.0.2)
Name (127.0.0.1:osboxes): jainish
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> pwd
257 "/home/jainish"
ftp> mkdir "practical-jainish"
257 "/home/jainish/practical-jainish" created
ftp> bye
221 Goodbye.
root@osboxes:/#
```

# User has been added successfully
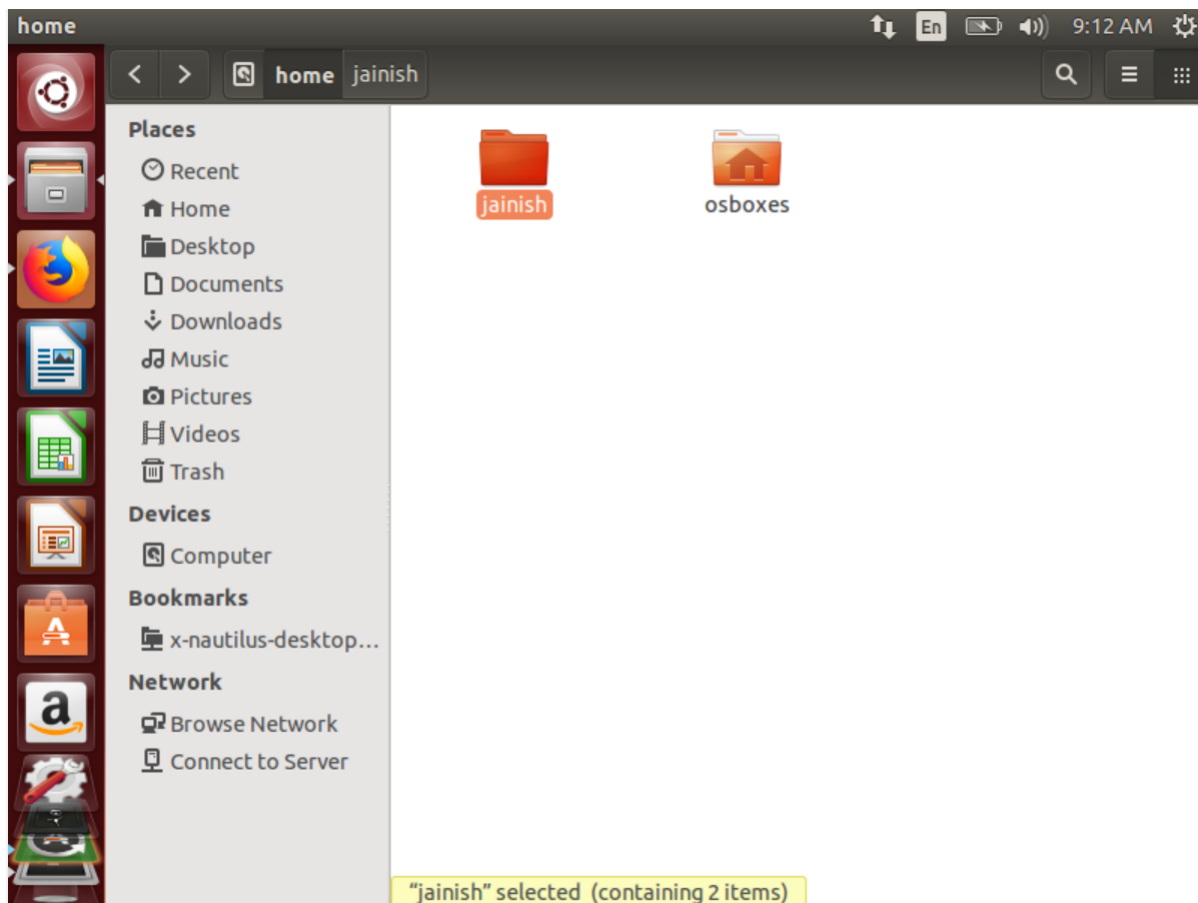


# A directory is successfully created under user