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SUBJECT : CN

EXPERIMENT NO. 9

AIM: Perform File Transfer and Access using FTP

THEORY:

Transferring files from a client computer to a server computer is called **"uploading"** and transferring from a server to a client is **"downloading".**

Requirements for using FTP

1. An FTP client like Auto FTP Manager installed on your computer
2. Certain information about the FTP server you want to connect to:
   a. The **FTP server address.** This looks a lot like the addresses you type to browse web sites.

Example : Server address is "ftp.videodesk.net".
Sometimes the server address will be given as a numeric address, like "64.185.225.87".

b. A user name and password. Some FTP servers let you connect to them anonymously. For anonymous connections, you do not need a user name and password. To transfer files, provide your client software (Auto FTP Manager) with the server address, user name, and password. After connecting to the FTP server, you can use Auto FTP Manager's **File Manager** to upload, download and delete files. Using the File Manager is a lot like working with Windows Explorer.

FTP and Internet Connections

FTP uses one connection for commands and the other for sending and receiving data. FTP has a standard port number on which the FTP server "listens" for connections. A port is a "logical connection point" for communicating using the Internet Protocol (IP). The standard port number used by FTP servers is 21 and is used only for sending commands. Since port 21 is used exclusively for sending commands, this port is referred to as a **command port.** For example, to get a list of folders and files present on the FTP server, the FTP Client issues a "LIST" command. The FTP server then sends a list of all folders and files back to the FTP Client. So what about the internet connection used to send and receive data? The port that is used for transferring data is referred to as a **data port.** The number of the data port will vary depending on the "mode" of the connection. (See below for Active and Passive modes.)

Active and Passive Connection Mode

The FTP server may support **Active** or **Passive** connections or both. In an Active FTP connection, the client opens a port and listens and the server actively connects to it. In a Passive FTP connection, the server opens a

port and listens (passively) and the client connects to it. You must grant Auto FTP Manager access to the Internet and to choose the right type of FTP Connection Mode.

Most FTP client programs select passive connection mode by default because server administrators prefer it as a safety measure. Firewalls generally block connections that are "initiated" from the outside. Using passive mode, the FTP client (like Auto FTP Manager) is "reaching out" to the server to make the connection. The firewall will allow these outgoing connections, meaning that no special adjustments to firewall settings are required.

If you are connecting to the FTP server using **Active mode** of connection you must set your firewall to accept connections to the port that your FTP client will open. However, many Internet service providers block incoming connections to all ports above 1024. Active FTP servers generally use port 20 as their data port. **IMPLEMENTATION:**

Step 1: Installation of the Package

1. # rpm –ivh vsftpd

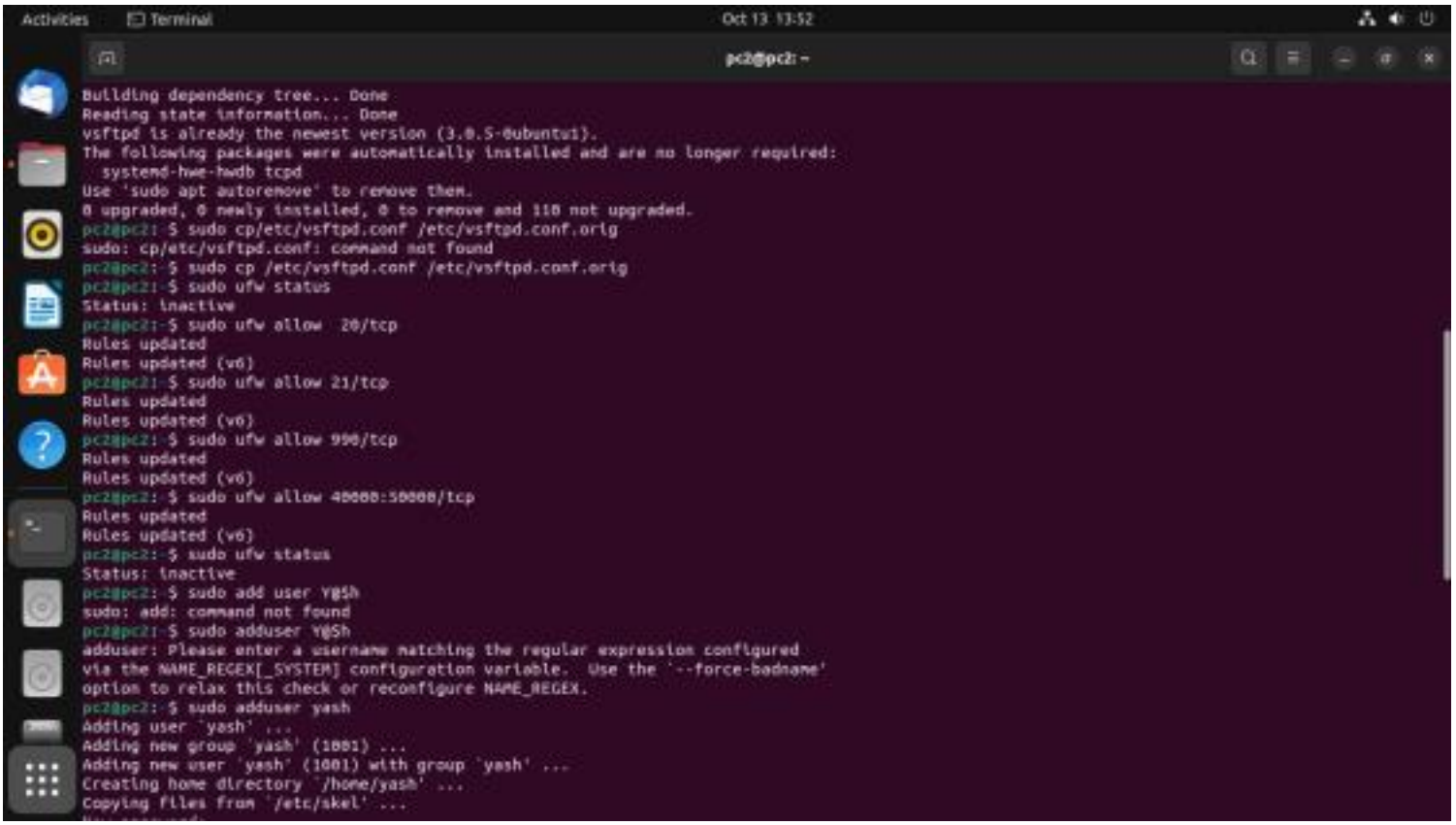
Step 2: Editing Configuration files

1. Open ftp configuration file **/etc/vsftpd/vsftpd.conf**

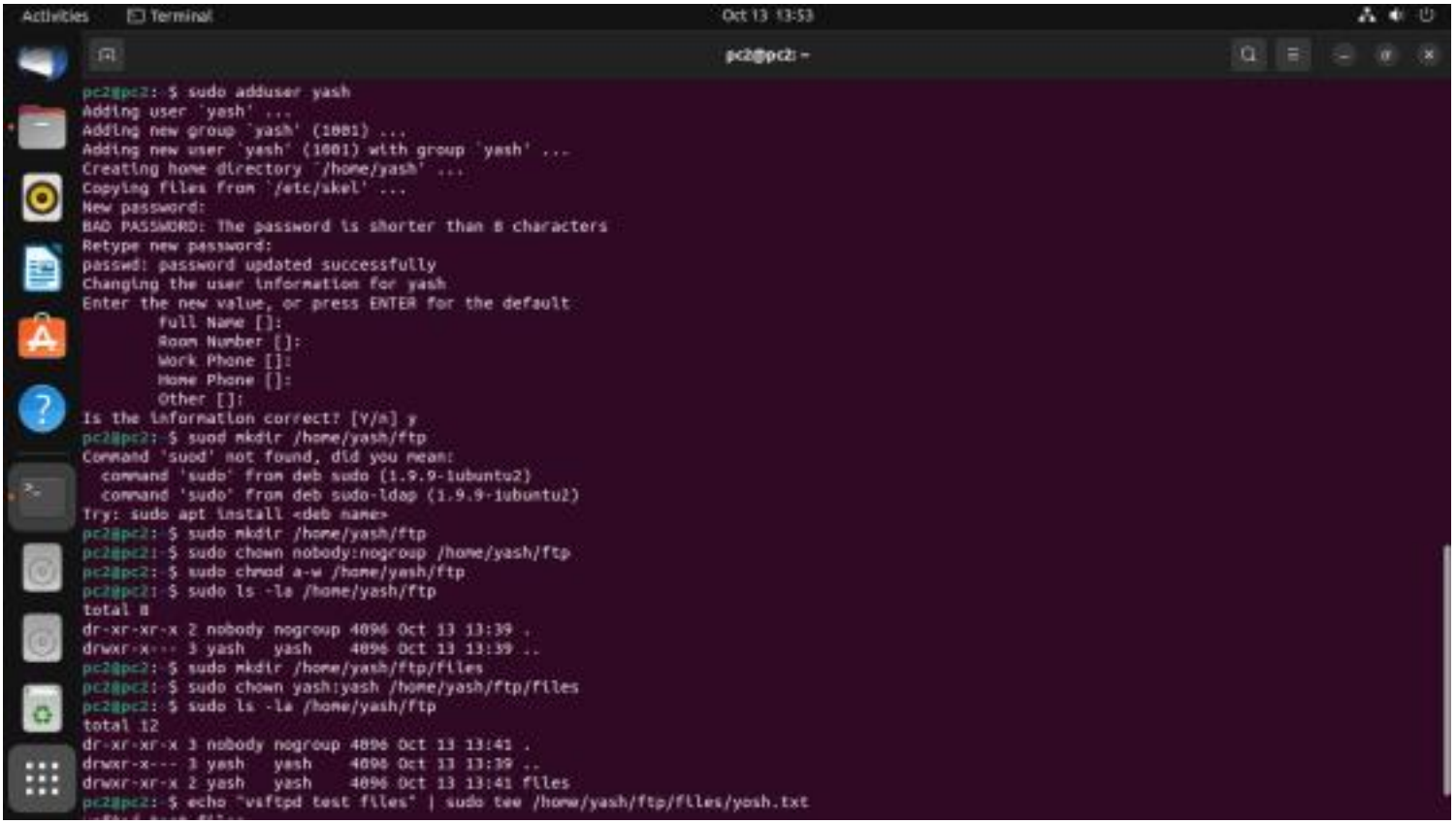
2. Set up anonymous access of FTP server.

vsftpd.conf is the main configuration file of FTP server and it contains lot of directives.

Configuration of an anonymous-only download is relatively simple. Default configuration of vsftpd.conf already supports anonymous-only download. But it also supports access from local users. All you need to do is disable the directive which allows locally configured users to login with their accounts.

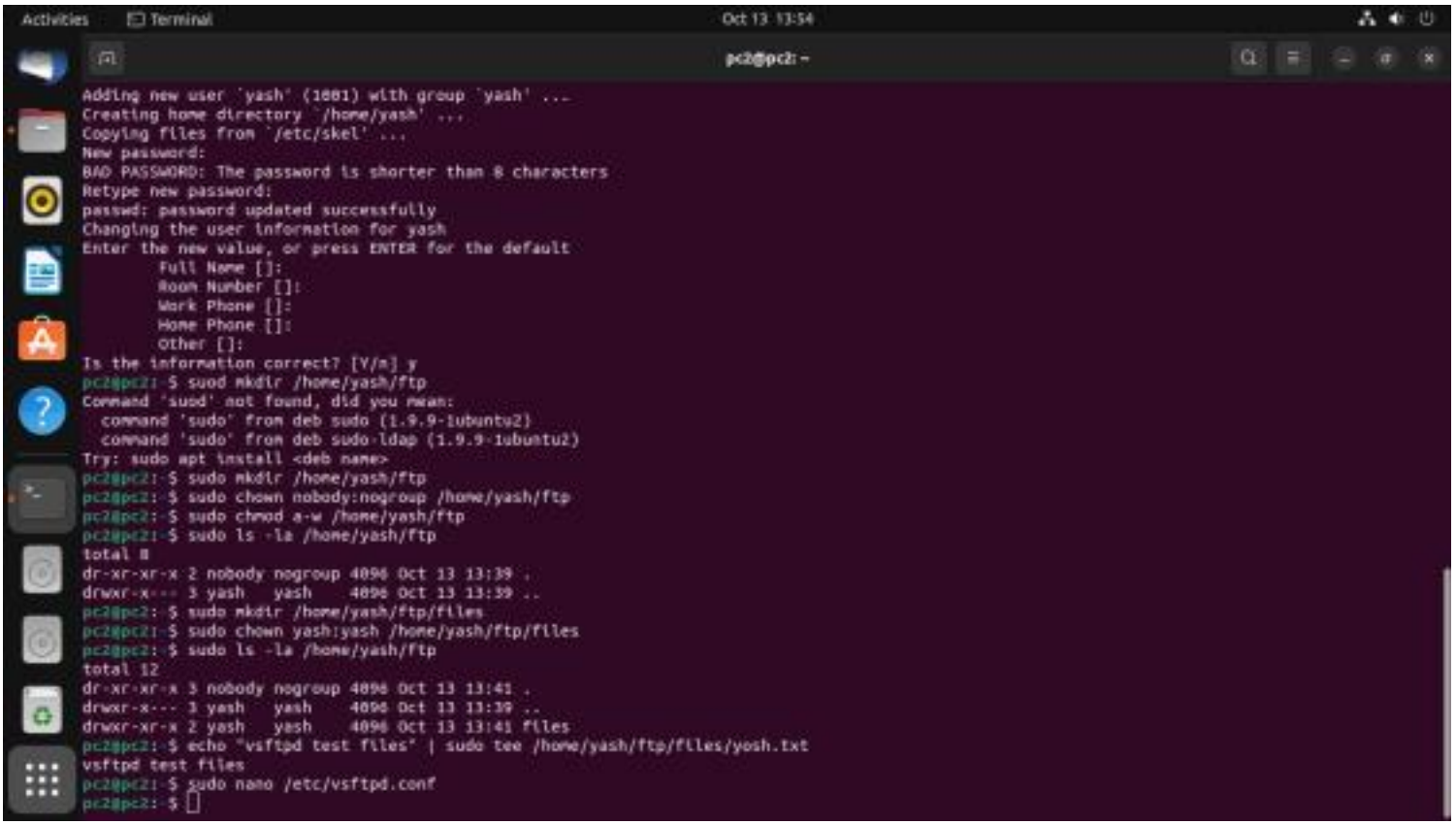


Step 3: Restart the vsftpd service

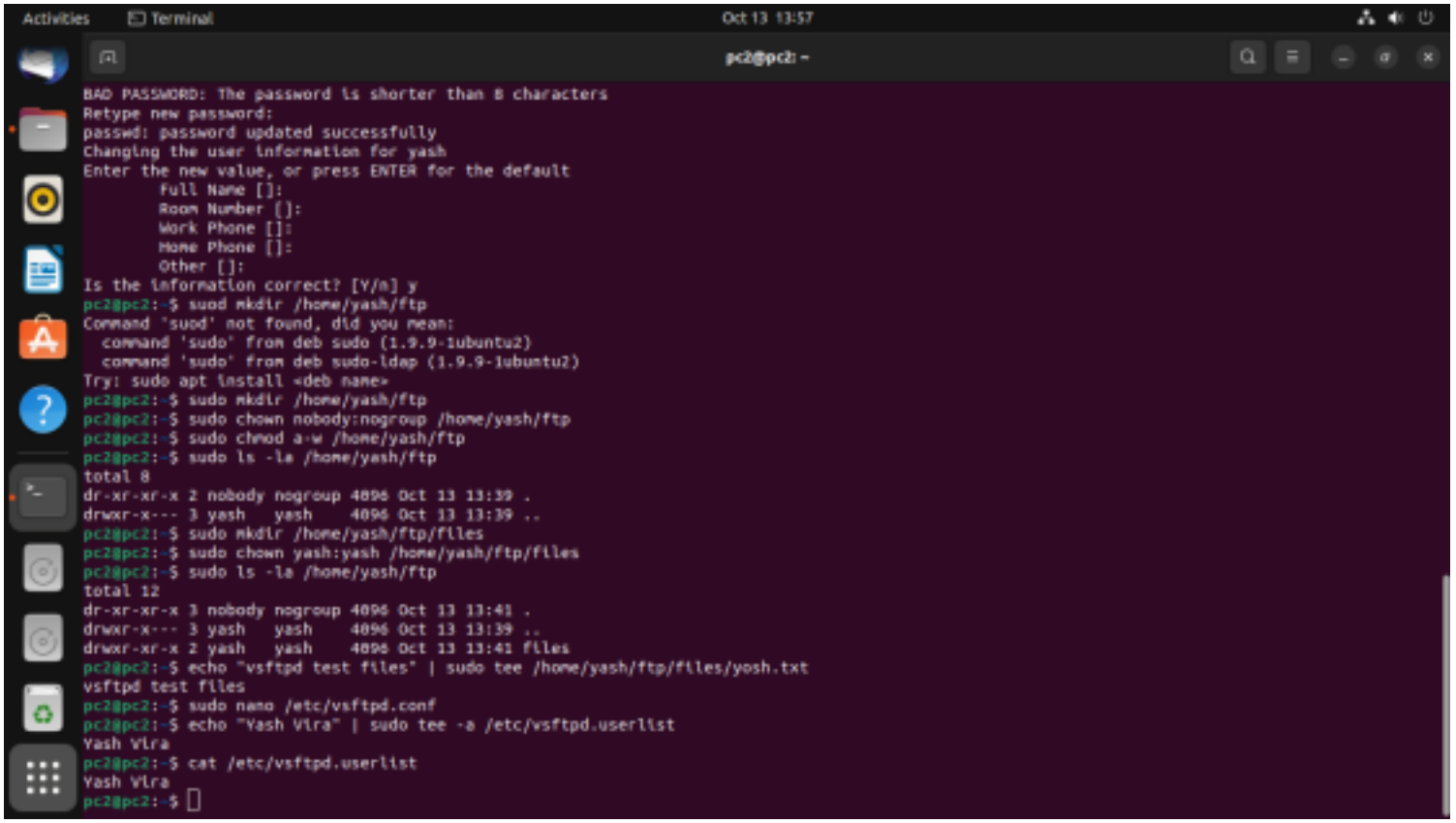


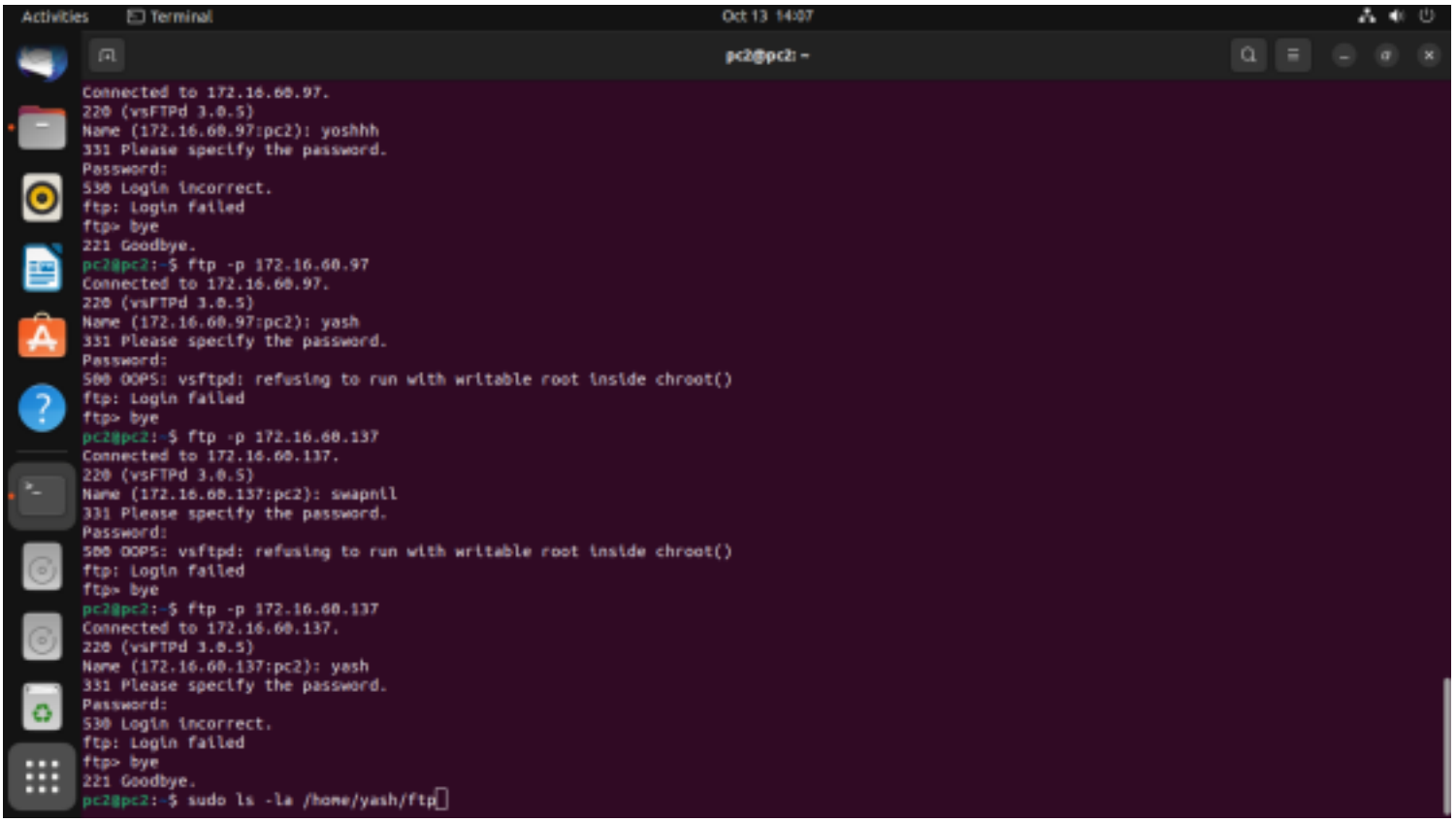
Step 4: Check connectivity with FTP Server.

 # Ping ip address of the ftp server (192.168.10.10)



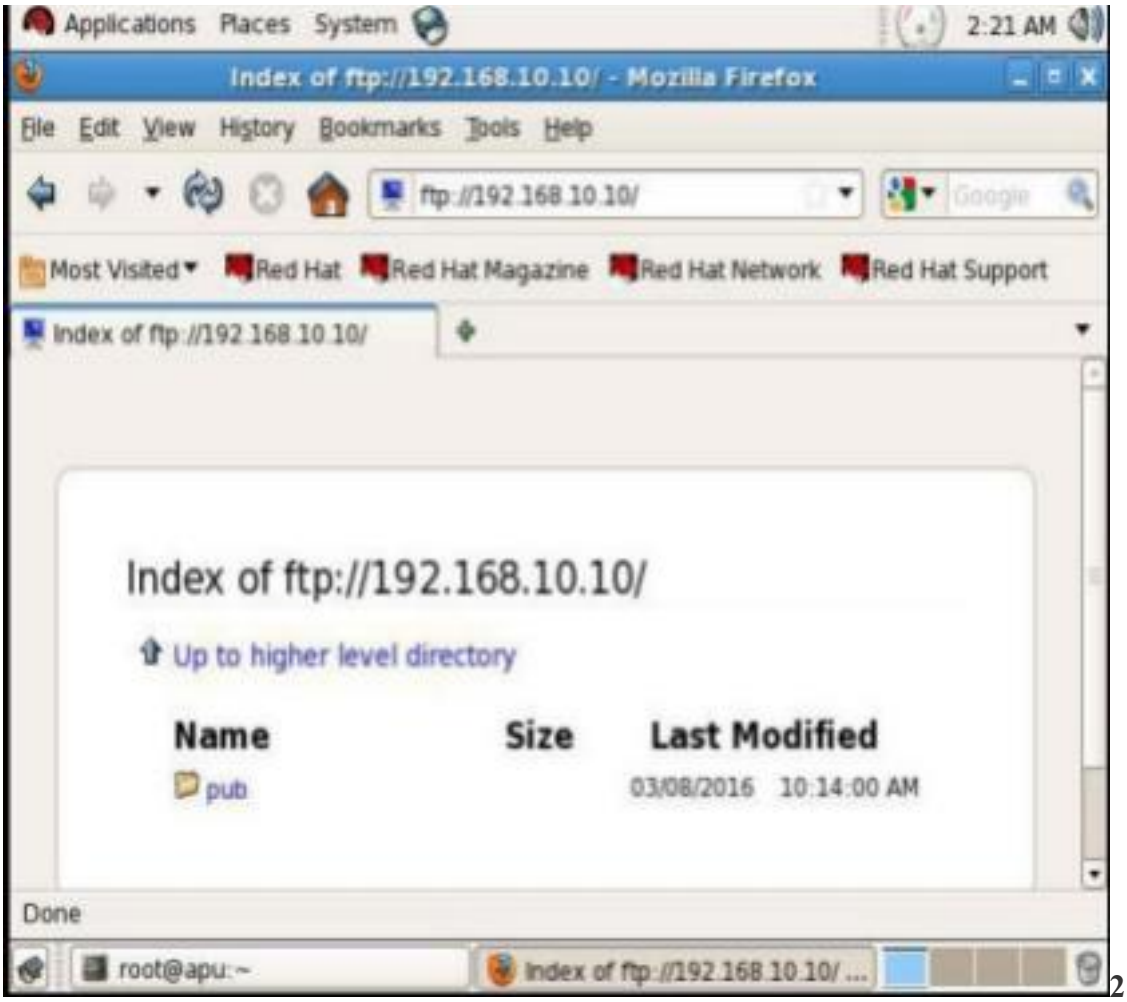
Step 5: Test the FTP server and transfer files using command prompt





We can download the file using anonymous user but cannot upload the file. Also the default data location (or pwd) of FTP server will be pub directory during anonymous access. **b. Access the FTP server and transfer files using command prompt**

First go to browser then and type FTP://192.168.10.10. It will show default location of pub directory.



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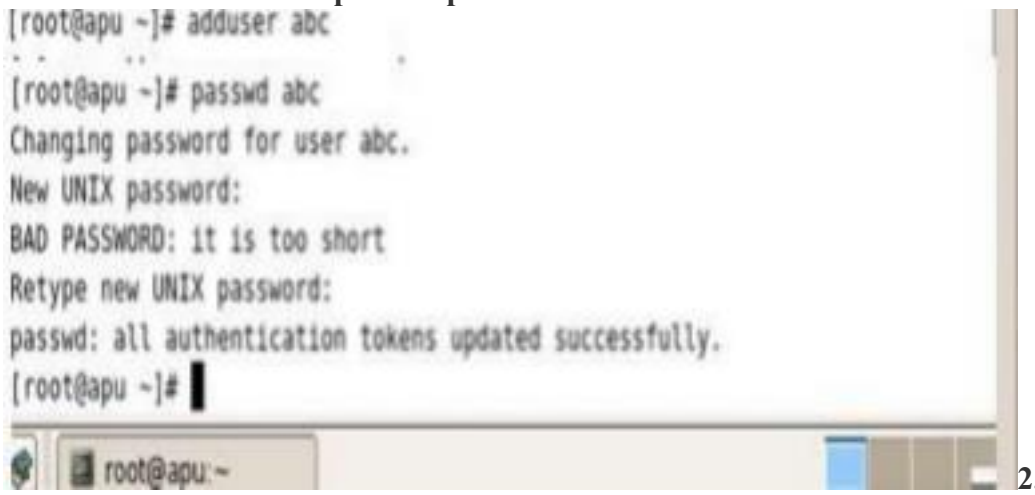
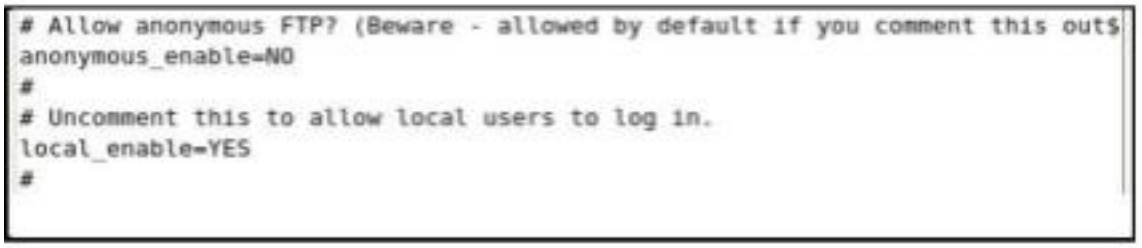
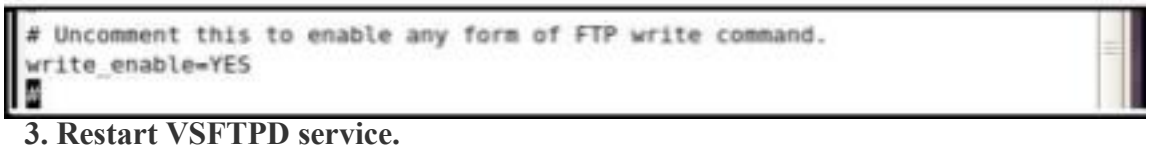
User Specific Authentication

1. Create local user and provide password to it.

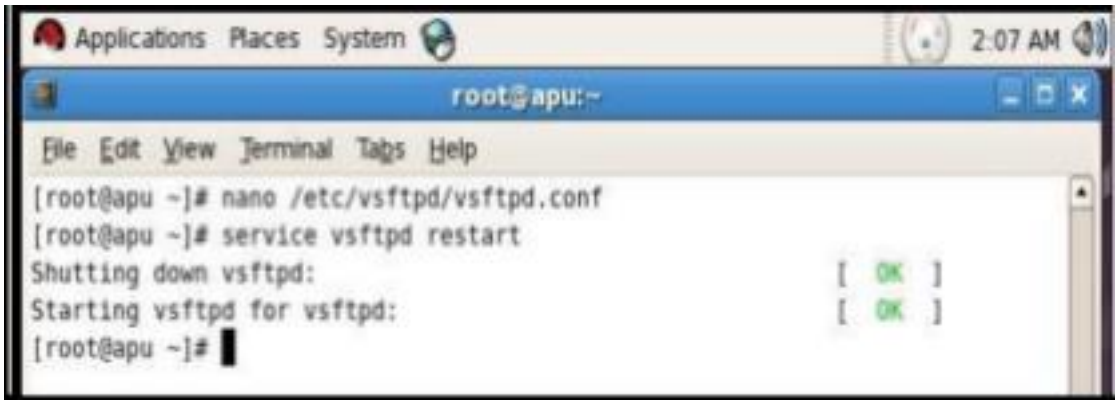


2. Edit VSFTPD configuration file.



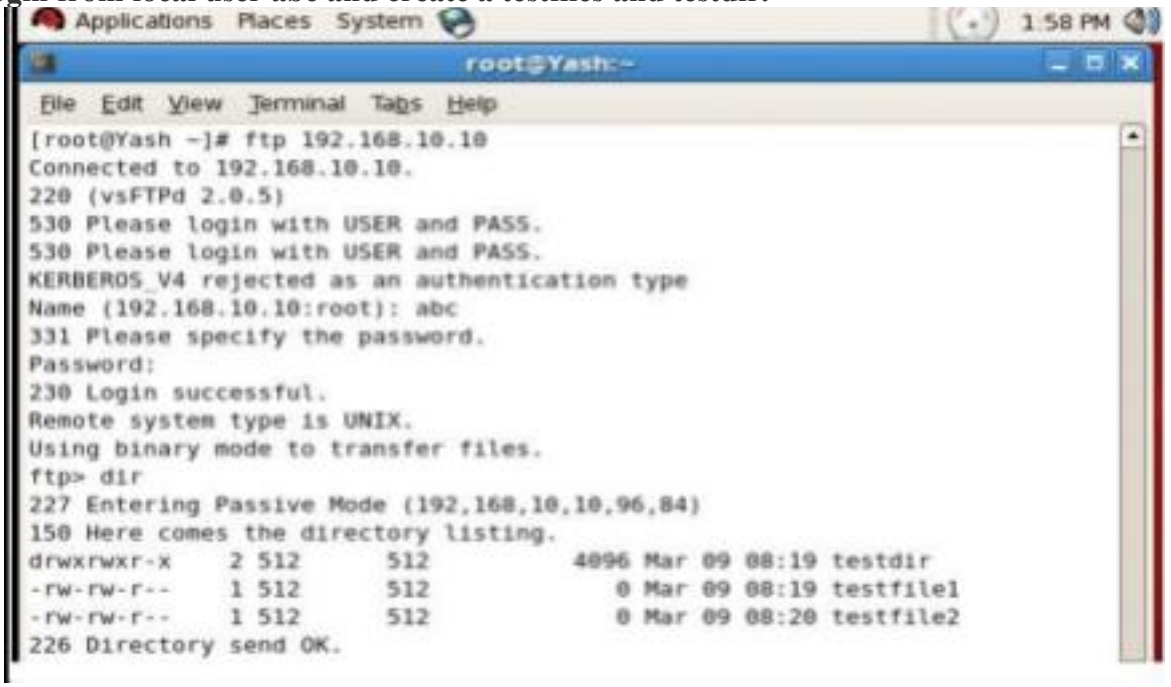


3. Restart VSFTPD service.

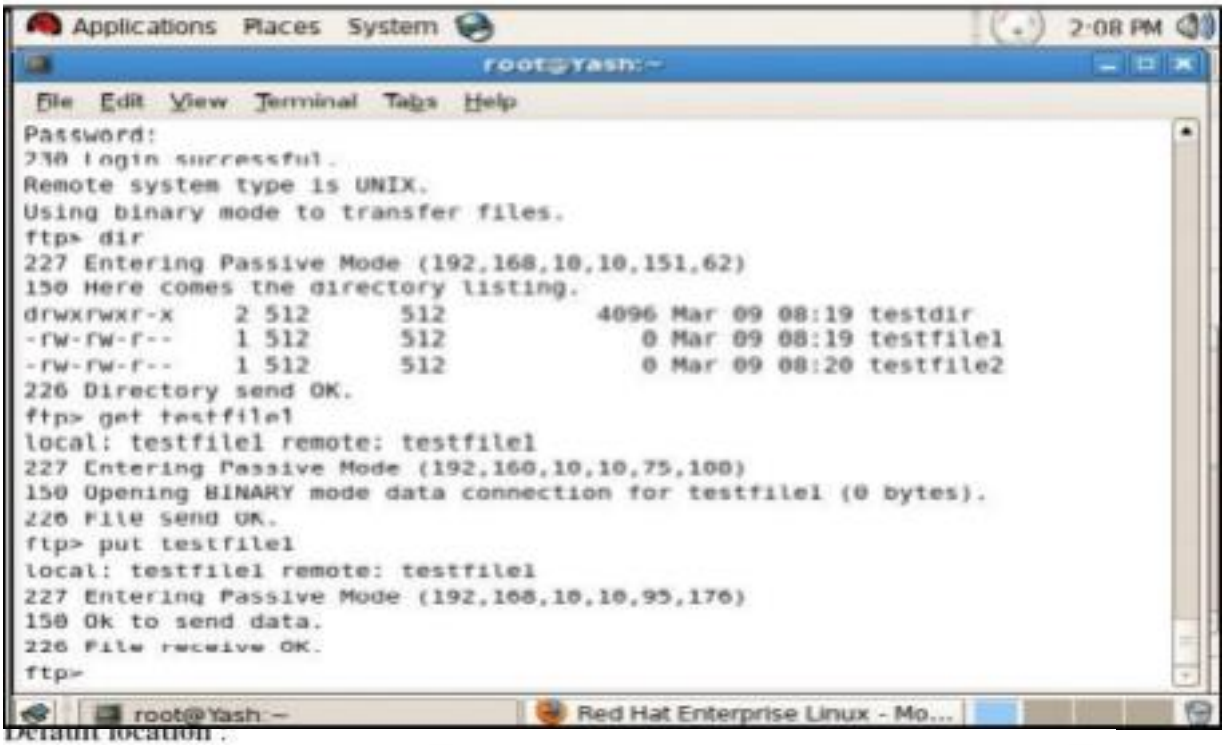


Access FTP server through command prompt

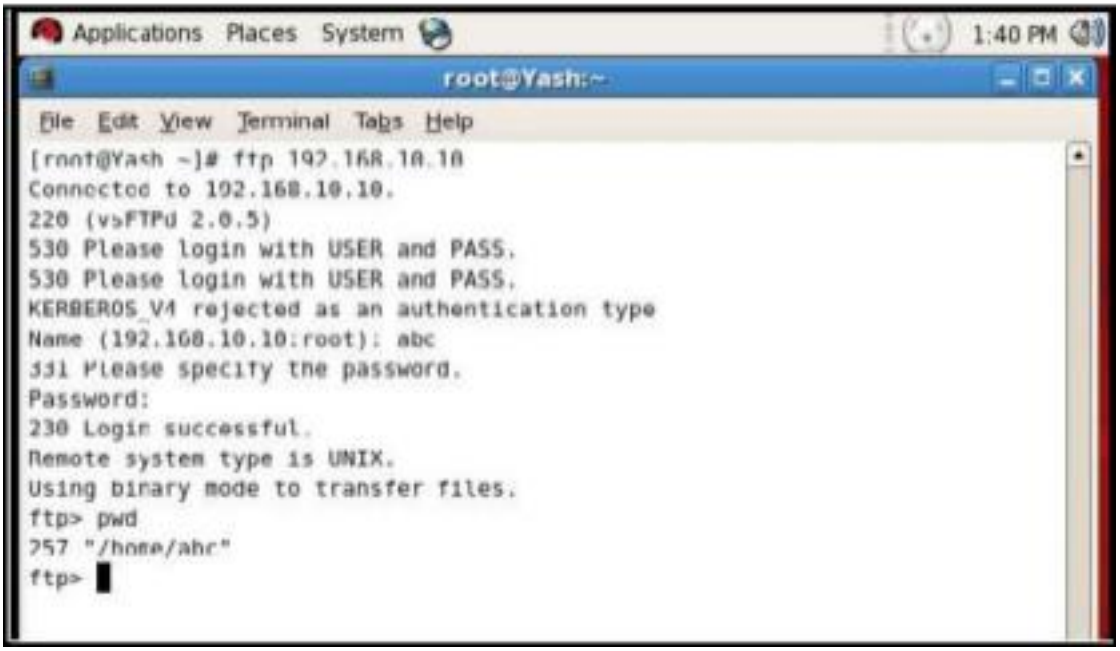
Login from local user abc and create a testfiles and testdir.



upload/download file.

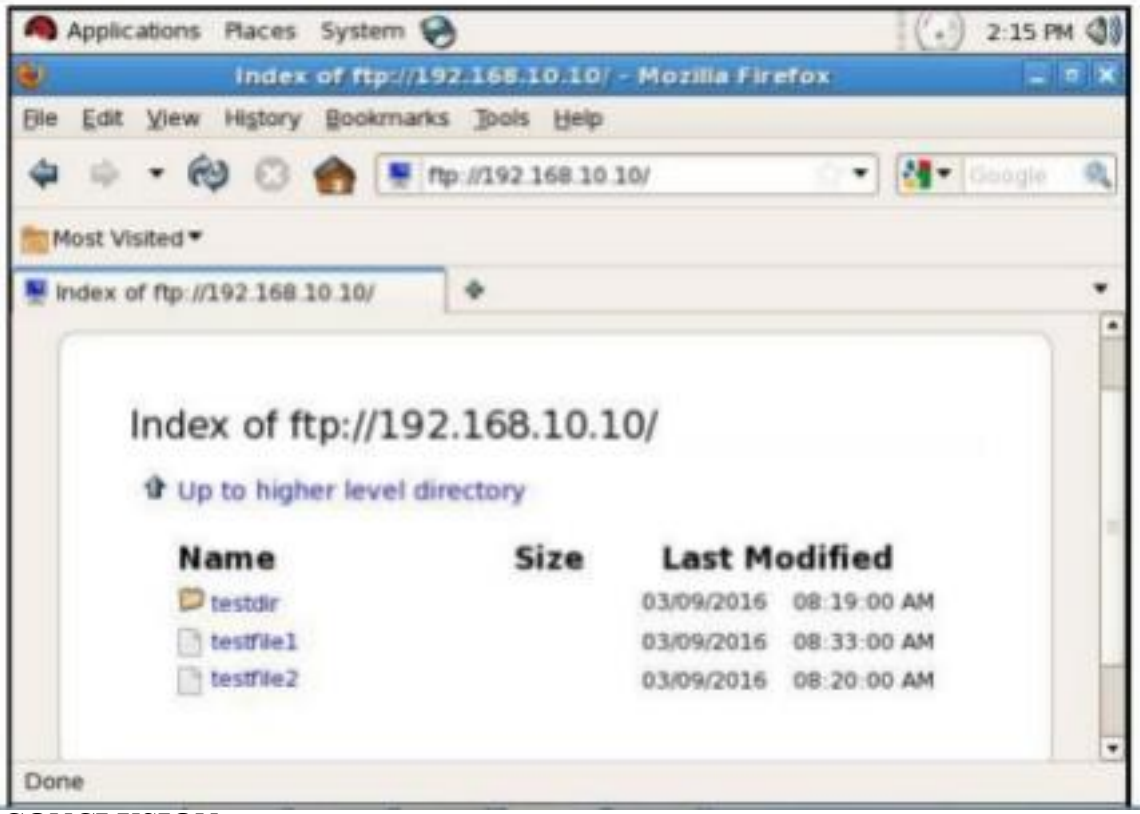


Default location :



Now go to browser and type FTP://192.168.10.10. Add username and password of local user and press enter.

List of directories and files created in local user will be shown :



CONCLUSION:

The File Transfer Protocol (FTP) is a standard network protocol used to transfer computer files from one host to another host over a TCP-based network, such as the Internet. FTP is built on a client-server architecture and uses separate control and data connections between the client and the server.

During the Anonymous access of FTP server default location of FTP data will be pub directory. However during user specific access default location of ftp data will be user directory in /home on server.

Questions:

1. What is File Transfer Protocol?
2. Explain security concerns of FTP.
3. Explain active and passive connection mode of FTP.
4. Explain remote FTP or FTPmail
5. Explain Anonymous FTP