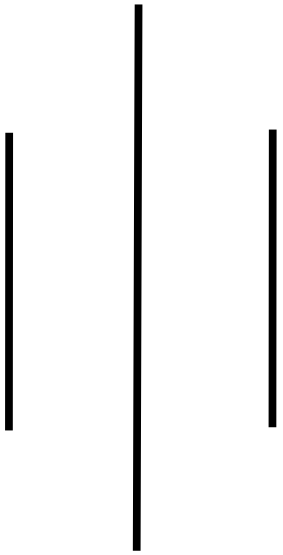
Deerwalk Institute Of Technology
Internet Technology



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FTP

a) FTP server configuration and installation.

→ FTP stands for File Transfer Protocol. It is used to transfer file between machines in the Internet. It listens to port 20 and port 21. Port no 20 is for Data Connection and port no 21 is for Data Transfer.

Some FTP applications are:

- Pure ftp server
- ProFtp server
- tftpd pxe boot
- Cisco ios trasfer etc
- Vsftpd (Very Secure FTP server)

Required Package in linux system are:

- **Vsftpd** for server
- **ftp** for client

Configuration:

See the port is available or not using command:

```
$ netstat -ntlup | grep 21
```

```
root@ubuntu:~# netstat -ntlup | grep 21
tcp6       0      0 :::21                   :::*                    LISTEN      29806/vsftpd

root@ubuntu:~# netstat -ntlup | grep 20
tcp6       0      0 :::80                   :::*                    LISTEN      2059/apache2

root@ubuntu:~#
```

0.0.0.0 indicates it is bound to all available IP address in a machine
192.168.0.10
192.168.0.11
192.168.0.12

Configuration files is: **/etc/vsftpd.conf**

```
  GNU nano 2.5.3                File: /etc/vsftpd.conf

# Example config file /etc/vsftpd.conf
#
# The default compiled in settings are fairly paranoid. This sample file
# loosens things up a bit, to make the ftp daemon more usable.
# Please see vsftpd.conf.5 for all compiled in defaults.
#
# READ THIS: This example file is NOT an exhaustive list of vsftpd options.
# Please read the vsftpd.conf.5 manual page to get a full idea of vsftpd's
# capabilities.
#
#
# Run standalone?  vsftpd can run either from an inetd or as a standalone
# daemon started from an initscript.
listen=NO
#
# This directive enables listening on IPv6 sockets. By default, listening
# on the IPv6 "any" address (::) will accept connections from both IPv6
# and IPv4 clients. It is not necessary to listen on *both* IPv4 and IPv6
# sockets. If you want that (perhaps because you want to listen on specific
# addresses) then you must run two copies of vsftpd with two configuration
# files.
listen_ipv6=YES
#
# 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.
```

Configuration parameters
`anonymous_enable=NO`
i.e username: FTP which is created default during installation.

If we wan to enable anonymous user to upload files in ftp server we need to enable
`anon_upload_enable=YES`

`local_enable=YES`
This will allow Linux user to use ftp service.

`allow_writeable_chroot=YES`
This is tell the Linux user to use FTP service in chrooted directory.

`ftpd_banner=Welcome to My FTP service.`
Use custom FTP banner.

To deny any user to FTP server put user-name in `/etc/ftpusers`

We can start client using `$ ftp` command:

```
root@ubuntu:~# ftp
ftp>
```

We can execute Linux command in FTP client by putting **!** at the beginning of the command.

eg
```
ftp>!clear
ftp>!ls
```

To explicitly allow user put following parameter in the in `/etc/vsftpd.conf`

```
userlist_enable=YES
userlist_file=/etc/vsftpd.userlist
userlist_deny=NO
```

Login to FTP server:

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

FTP Commands:

- put → put single file or upload single file to FTP server
- get → download single file from FTP server to current Linux location
- mput → uploads multiple file to FTP server
- mget → download multiple file from FTP server
- ls → list files and directory in FTP server
- dir → same as ls
- cd → change directory in ftp server

```
ftp> get cacheClear.sh
local: cacheClear.sh remote: cacheClear.sh
200 PORT command successful. Consider using PASV.
150 Opening BINARY mode data connection for cacheClear.sh (1163 bytes).
226 Transfer complete.
1163 bytes received in 0.02 secs (57.5934 kB/s)
ftp>
```