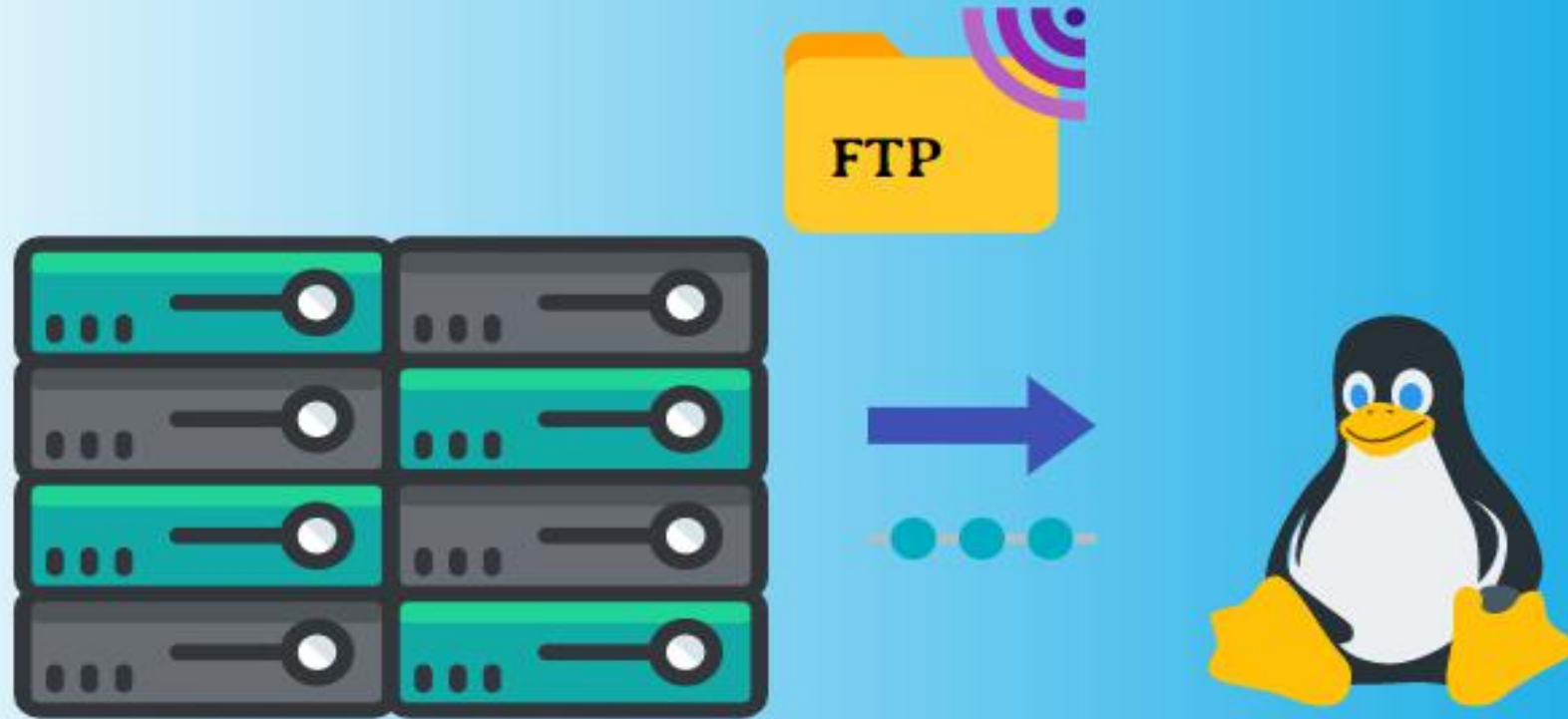


FTP Server in Linux



BY GROUP “Linux lovers”

Members

- Ahmadgul
- Farooq
- Rohoullah
- Abdul bashir
- Rahimullah



Outline

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Features of vsftpd FTP server

- Supports SSL/TLS integration
- Can jail users into its home directory with a feature called chroot.
- Can limit bandwidth.
- Supports virtual users
- Supports IPv6

Step 1: Install FTP server

- Install FTP server(sudo apt install vsftpd)
- if it was installed then
- To check if the vsftpd service is active (sudo systemctl status vsftpd)
- start service with the command: (sudo systemctl start vsftpd)
- If your vsftpd is not active, then type (sudo systemctl enable --now vsftpd)

```
● vsftpd.service - vsftpd FTP server
   Loaded: loaded (/lib/systemd/system/vsftpd.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2022-05-31 08:44:20 +0430; 33min ago
     Process: 933 ExecStartPre=/bin/mkdir -p /var/run/vsftpd/empty (code=exited, status=0/SUCCESS)
    Main PID: 934 (vsftpd)
      Tasks: 1 (limit: 9309)
     Memory: 708.0K
    CGroup: /system.slice/vsftpd.service
            └─934 /usr/sbin/vsftpd /etc/vsftpd.conf

May 31 08:44:20 ahmadgul-Latitude-E7450 systemd[1]: Starting vsftpd FTP server...
May 31 08:44:20 ahmadgul-Latitude-E7450 systemd[1]: Started vsftpd FTP server.
~
```

Step 2: Configure Firewall

- check if firewall is active (`sudo ufw status`)
- to allow ftp ports type
- `sudo ufw allow 20/tcp`
- `sudo ufw allow 21/tcp`
- `sudo ufw allow 5000:10000/tcp`

Step 3: Configure Users

The two most common use cases of FTP servers are:

1. You want to host a public FTP server and a lot of public users are going to connect to your FTP server to download files.
2. You want to upload your files to your Linux server for personal use and you would not have public users.

Anonymous FTP

Anonymous FTP a username of anonymous and your email address for the password. Once logged in to a FTP server, you automatically have access to only the default anonymous FTP directory

- creating our public user account
- `(sudo adduser ftpuser)`
- for security purposes, we will disable ssh permission for this user
- `(sudo nano /etc/ssh/sshd_config)`
- Add the following line in this file(`DenyUsers ftpuser`)
- Now, restart the SSH service(`sudo systemctl restart sshd`)

Step 4: Configure the VSFTDP Server

- The (/etc/vsftpd.conf) file is the main configuration file for VSFTPD
- back up the original configuration file (sudo cp /etc/vsftpd.conf /etc/vsftpd.conf.bak)
- to edit the configuration file (sudo nano /etc/vsftpd.conf)

<code>anonymous_enable=NO</code>	Disable the default anonymous login
<code>local_enable=YES</code>	Allow local Logins.
<code>write_enable=YES</code>	Permission to allow FTP commands
<code>chroot_local_user=YES</code>	Allow local users to access files.
<code>userlist_enable=YES0</code>	Will load the usernames
<code>userlist_file=/etc/vsftpd.userlist</code>	Stores the usernames
<code>userlist_deny=NO</code>	

Step 5: Configure and secure vsftpd

- Create the FTP folder and set permissions
- Create the FTP folder (`sudo mkdir /ftp`)
- will change this directory's owner to our admin user
- (`sudo chown adminuser /ftp`)

Step 5: Configure and secure vsftpd

- Open the vsftpd configuration file
- (sudo nano /etc/vsftpd.conf)
- Make sure the following lines are uncommented
- anonymous_enable=NO
- local_enable=YES
- write_enable=YES

Step 6: Configure the VSFTDP Server

- we will specify the default directory for FTP connections which will open when someone connects to our FTP server. Add the following line (local_root=/ftp)
- Locking user into the home directory
- Now, for security reasons, we will lock the ftpuser to the default directory, as by default, a user can browse the whole Linux server. To do this, vsftpd uses chroot. To do this, uncomment the following lines
- (chroot_local_user=YES
- chroot_list_enable=YES
- chroot_list_file=/etc/vsftpd.chroot_list)

Configure the VSFTDP Server

- add the following line as it is not in the configuration file by default
- (allow_writeable_chroot=YES)
- Setting file permission
- (local_umask=0002)
- This line will set the modification permission of every new file created to 664(-rw-rw-r-) and of every new folder to 775(rwxrwxr-x). With this, the ftpuser can only read and download files from every sub-directory of our FTP directory, but it does not have permission to upload anything to our FTP directory since it is not the owner

Configure the VSFTDP Server

- Whatever users you specify in this file, will not be chroot-ed. So add your admin username in this file because we do not want to lock it
- `sudo touch /etc/vsftpd.chroot_list`
- `sudo nano /etc/vsftpd.chroot_list`

- we need to restart our vsftpd server
- `sudo systemctl restart --now vsftpd`

2 Access from an FTP client & FTP server commands

- find your server ip(ifconfig)
- ftp://127.0.0.1 OR ftp>127.0.0.1
- FTP server commands
- Command Function
- pwd print the current working directory
- cwd change working directory
- dele delete the specified file
- cdup change to the parent directory
- help displays help information
- cd change the working directory
- get filename download the specified file
- put filename uploads the specified file
- bye end FTP session

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Anonymous FTP

The FTP Archive

The department maintains an anonymous FTP site for the purpose of disseminating Brown software and other documents. The URL is:

```
ftp://ftp.cs.brown.edu
```

There are four sections of the archive, the public section (`/pub`), the user section (`/u`), the incoming section (`/incoming`) and the guest account section (not visible).

List of free online SFTP servers

Web	Check	Hostname	Login	Note
web	check	test.rebex.net:22	demo/password	Also supports SSH, FTP/SSL, FTP, IMAP, POP3 and Time protocols. Read-only.
web	check	itcsubmit.wustl.edu:22	-	Only for connection test. No public username/password available.
web	n/a	demo.wftpserver.com:2222	demo-user/demo-user	Also supports FTP/SSL and FTP.

FTP Server on Android

 <p>AndFTP (your FTP) LYSESOFT</p> <p>★★★★☆ FREE</p>	 <p>WiFi FTP Server Medha Apps</p> <p>★★★★☆</p>	 <p>Ftp Server The Olive Tree</p> <p>★★★★☆ FREE</p>	 <p>FtpCafe FTP Client Droidware UK</p> <p>★★★★☆ FREE</p>	 <p>Turbo FTP client & Vlad Mihalachi</p> <p>★★★★☆ FREE</p>	 <p>FTP Server - Access Banana Studio</p> <p>★★★★☆ FREE</p>
 <p>ES File Explorer File ES Global</p> <p>★★★★☆</p>	 <p>FTP Express Zifero.com</p> <p>★★★★☆ FREE</p>	 <p>FTP Client Outfall Inc</p> <p>★★★★☆ FREE</p>	 <p>FTP Client AppAzing.net</p> <p>★★★★☆ FREE</p>	 <p>File Manager (File CM_Filemanager</p> <p>★★★★☆ FREE</p>	 <p>WiFi FTP (WiFi File MDJ Studio</p> <p>★★★★☆ FREE</p>

To uninstall vsftpd

- `sudo dpkg --get-selections | grep vsftpd`
- `sudo apt-get --purge remove vsftpd`

Conclusion

- FTP is the simplest way to transfer files over a network but has its own security flaws, FTP commands are similar to Unix Terminal commands, FTP comes with its pros and cons, operates on two basic connections. To conclude, we have understood, what an FTP server is, learned its Advantages and Disadvantages, the stepwise procedure for its Installation on a Linux Ubuntu and we tried a few of its basic commands.

