Setup vsftpd FTP Server on UBUNTU

Follow the below steps in order to setup vsftpd server on Ubuntu:

Step 1: Install VSFTPD

First, update the repository index using the below command in Terminal:

```
$ sudo apt update
```

Now, you can install vsftpd as follows:

```
$ sudo apt install vsftpd
```

The system might prompt you for a sudo password and might also prompt you with the Y/n (yes/no) option for proceeding with the installation of vsftpd. Press Y to proceed.

Once installed check the status of vsftpd

```
$ sudo service vsftpd status
```

After the installation is finished, you can verify it using the below command:

```
$ vsftpd -versions
```

Step 2: Allow FTP in the firewall

If a firewall is running on your machine, allow ports 20 and 21 for FTP traffic. To check if a firewall is running, run the below command in Terminal:

```
$ sudo ufw status
```

If you see “active” status in the output, it means the Firewall is running on your system.

Now to allow port 20 and 21for FTP and port 40000 – 50000 for passive FTP and port 990 for TLS, run the below command in Terminal:

```
$ sudo ufw allow 20/tcp
$ sudo ufw allow 21/tcp
$ sudo ufw allow 40000:50000/tcp
$ sudo ufw allow 990/tcp
```

To run at remote server ssh must be open.

```
$ sudo ufw allow openssh
```

Enable the firewall.

```
sudo ufw enable
```

Now to confirm if the rules have been added, run the below command in Terminal:

```
$ sudo ufw status
```

The below output shows the Firewall has allowed the FTP ports.

20/TCP ALLOW Anywhere

21/TCP ALLOW Anywhere

Step 3: Configuring FTP Access

Now we will do some basic configurations for the FTP server. But before going for configurations, let's make a backup of the vsftpd configuration file using the below command in Terminal:

```
$ sudo cp /etc/vsftpd.conf  /etc/vsftpd.conf.origin
```

Now edit the vsftpd configuration file as follows:

```
$ sudo nano /etc/vsftpd.conf
```

Now modify the configurations to match them as follows:

```
listen=YES
listen_ipv6=NO
anonymous_enable=NO
local_enable=YES
write_enable=YES
local_umask=022
dirmessage_enable=YES
use_localtime=YES
xferlog_enable=YES
connect_from_port_20=YES
```

```
chroot_local_user=YES
secure_chroot_dir=/var/run/vsftpd/empty
pam_service_name=vsftpd
force_dot_files=YES
pasv_min_port=40000
pasv_max_port=50000
user_sub_token=$USER
local_root=/home/$USER/ftp
```

Now save and close the vsftpd.conf configuration file.

Step 4: Add FTP user

Now, we will add a user to the allowed FTP users list. For testing purposes, we will create a new user account named “tin”, and then set its password.

To create a new FTP user, use the following command:

```
$ sudo adduser ftpuser
```

Then set its password using the command below:

```
$ sudo passwd ftpuser
```

Add the user to the allowed FTP users list:

```
$ echo "ftpuser" | sudo tee -a /etc/vsftpd.userlist
```

Create a directory in user’s home directory.

```
$ sudo mkdir /home/ftpuser/ftp
```

Change owner of the directory

```
$ sudo chown nobody:nogroup /home/ftpuser/ftp
```

Set permission so that it is not writable by anyone.

```
$ sudo chmod a-w /home/ftpuser/ftp
```

In FTP directory create a directory where user can upload file.

```
$ sudo mkdir /home/ftpuser/ftp/files
```

Assign ownership of this directory to ftpuser, otherwise he cannot write in the file.

```
$ sudo chown ftpuser:ftpuser /home/ftpuser/ftp/files
```

Step 5: Restart VSFTPD service

Once you have finished the configurations, restart the vsftpd service. Run the command below to do so:

```
$ sudo systemctl restart vsftpd.service
```

//To enable the vsftpd as a startup, run the following command in the Terminal:

```
// sudo systemctl enable vsftpd
```

Step 6: Test FTP Access

We have configured the FTP server to allow access to only user "tin". Now to test it, you will need an FTP client. We will use here the Filezilla as the FTP client.

You can install the Filezilla as follows:

```
$ sudo apt install filezilla
```

To launch Filezilla, either search it through the Applications list or simply execute the following command in Terminal:

```
$ filezilla
```

This will be the default view you will see when you launch the Filezilla.

In one terminal run the FTP server using command:

/sbin/vsftpd

Now to connect to the FTP server, we will require its IP address. You can find the IP address of your FTP server by entering the command in Terminal:

ip a

In the Filezilla window, type the **IP address** of the vsftpd FTP server, **username**, and **password** in their respective fields. Then, click **Quick connect** to connect to the vsftpd FTP server.

Once you are connected to the FTP server, try uploading and downloading the files to and from the FTP server, respectively.