# **Advanced FTP Server Setup**

## **Project Overview**

This project aims to set up and configure a secure FTP server using vsftpd and an FTP client like FileZilla. The objective is to ensure controlled access to different user groups, secure file transfers, and effective user management.

## **Objectives**

* Install and configure an FTP server with vsftpd.
* Implement security measures like disabling anonymous access and enabling chroot jail.
* Configure different user groups with specific access rights.
* Install and configure FileZilla for testing file transfers.

## **Step-by-Step Setup**

### **Step 1: Install and Configure the FTP Server (vsftpd)**

#### **Install vsftpd on Ubuntu/Debian:**

sudo apt update

sudo apt install vsftpd -y

#### **Configure vsftpd:**

Edit the configuration file:

sudo nano /etc/vsftpd.conf

Modify or add the following settings:

anonymous\_enable=NO

local\_enable=YES

write\_enable=YES

chroot\_local\_user=YES

allow\_writeable\_chroot=YES

ssl\_enable=YES

rsa\_cert\_file=/etc/ssl/certs/vsftpd.pem

rsa\_private\_key\_file=/etc/ssl/private/vsftpd.pem

pasv\_enable=YES

pasv\_min\_port=40000

pasv\_max\_port=50000

Restart the vsftpd service:

sudo systemctl restart vsftpd

### **Step 2: Create and Manage Users**

Create the required users and directories:

sudo useradd -m -d /var/ftp/dev -s /usr/sbin/nologin devTeam

sudo useradd -m -d /var/ftp/qa -s /usr/sbin/nologin qaTeam

sudo useradd -m -d /var/ftp/client -s /usr/sbin/nologin clientUser

Set passwords:

sudo passwd devTeam

sudo passwd qaTeam

sudo passwd clientUser

Set directory permissions:

sudo chown -R devTeam:devTeam /var/ftp/dev

sudo chown -R qaTeam:qaTeam /var/ftp/qa

sudo chown -R clientUser:clientUser /var/ftp/client

sudo chmod 750 /var/ftp/dev

sudo chmod 750 /var/ftp/qa

sudo chmod 750 /var/ftp/client

### **Step 3: Install and Configure FileZilla**

Install FileZilla:

sudo apt install filezilla -y

Configure FileZilla:

* Open FileZilla
* Go to **File > Site Manager**
* Create a new site with:
  + Host: (your server IP)
  + Protocol: FTP
  + Encryption: Require explicit FTP over TLS
  + Login type: Normal
  + Username: (e.g., devTeam, qaTeam, clientUser)
  + Password: (set during user creation)

### **Step 4: Test File Transfers**

* Use **devTeam** to upload and download files in /var/ftp/dev
* Use **qaTeam** to download files from /var/ftp/qa
* Use **clientUser** to download files from /var/ftp/client

## **Screenshots**

(Include relevant screenshots of configuration files, FileZilla setup, and file transfers.)

## **Resources**

* [Setting up vsftpd](https://ubuntu.com/server/docs/set-up-an-ftp-server)
* [GitHub Documentation](https://docs.github.com/en/get-started)