



# Final Project- Simple FTP Client

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BUPT/QMUL  
2019-5-9



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Electronic Engineering 



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# How to install FTP server in your own computer



# Objective


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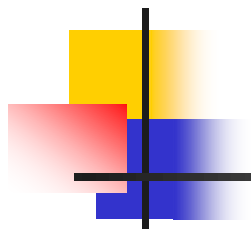
- Install FTP server in your own computer
- It can be used to learn FTP commands. What is more important, it can be used to debug your simple FTP client.



# Three possible cases of developing environments

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- Case 1: using virtual machine
  - Install FTP server in Windows
    -  **FileZilla** (server version)
- Case 2: using independent Ubuntu system
  - Install FTP server in Ubuntu
- Case 3: using MacOS
  - Install FTP server in MacOS
- Of course you can choose other applications by yourself



# Case 1:

## Install FileZilla server in Windows

- Install software
- FTP Server configuration (to enable ftp service)



# FileZilla Server (for Windows users)

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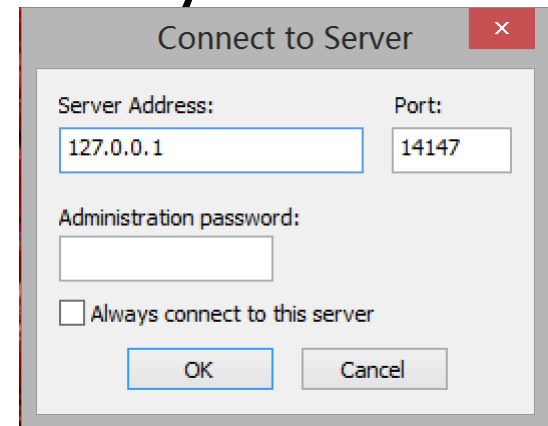
- Download from <https://filezilla-project.org/>
- PAY ATTENTION: download the server programme not the client
- Double-click the exe file and install
  - Next → Next → ..... → OK



# FileZilla Server (for Windows users)

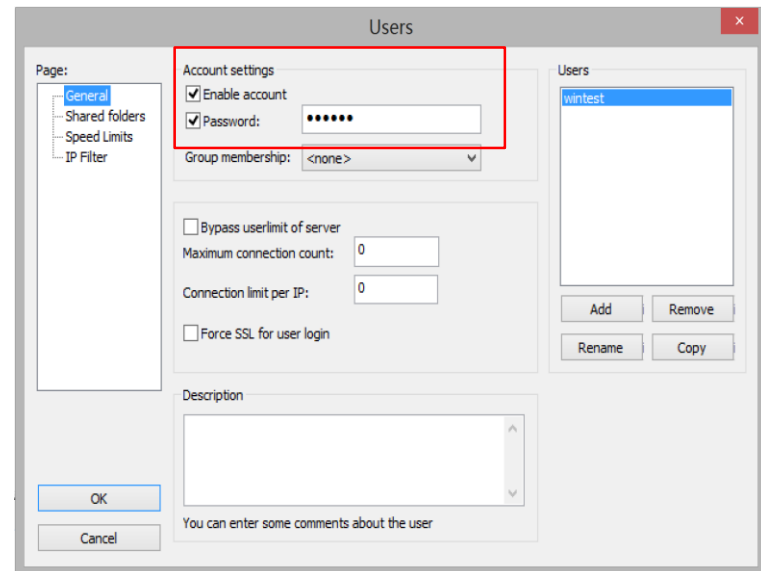
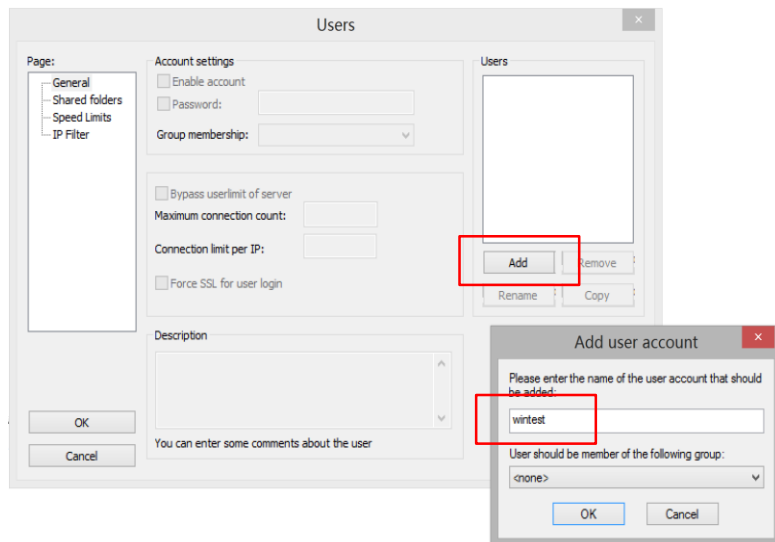
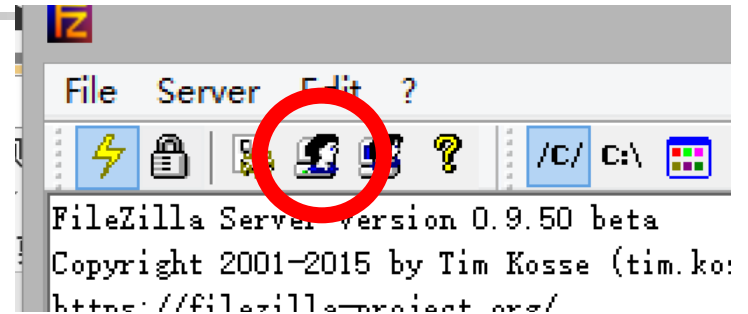
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- Click “FileZilla Server Interface”
  - Set the address as 127.0.0.1
  - Password is not necessary
  - Port is not necessary
  - Check the “Always” option if you like



# FileZilla Server (for Windows users)

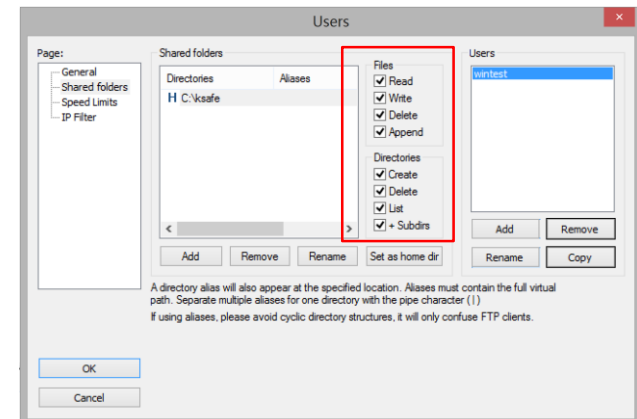
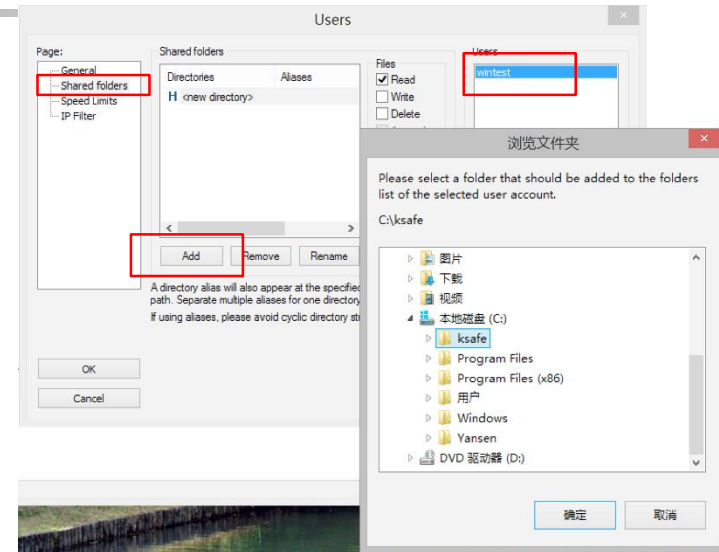
- Click the User Setting Button
- Add a new user
- Set password





# FileZilla Server (for Windows users)

- Click the "Shared folders"
- "Add" a new folder for wintest
  - Replace the "wintest" with your own name
- Check all the permissions
- Click "OK" and finish



# Connect server

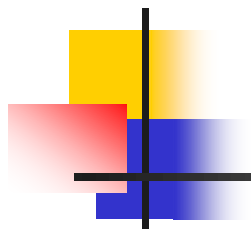
- Get IP address of your ftp server in Windows

```
无线局域网适配器 无线网络连接:

   连接特定的 DNS 后缀 . . . . . : 
   IPv6 地址 . . . . . : 2001:da8:215:8f01:45
   临时 IPv6 地址. . . . . : 2001:da8:215:8f01:ad
   本地链接 IPv6 地址. . . . . : fe80::45e8:7336:3b28
   IPv4 地址 . . . . . : 10.122.199.235
   子网掩码 . . . . . : 255.255.192.0
   默认网关. . . . . : fe80::274:9cff:fe7d:
                        10.122.192.1
```

- Connect your ftp server in Ubuntu

```
student@BUPTIA:~$ ftp 10.122.199.235
Connected to 10.122.199.235.
220-FileZilla Server 0.9.60 beta
220-written by Tim Kosse (tim.kosse@filezilla-pro
220 Please visit https://filezilla-project.org/
Name (10.122.199.235:student): down
331 Password required for down
Password:
230 Logged on
Remote system type is UNIX.
ftp>
```



## Case 2:

# Install FTP server in Ubuntu



# Install FTP Server In Ubuntu

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- Type the command

- `$ sudo apt-get install vsftpd`

```
正在设置 vsftpd (3.0.2-1ubuntu2.14.04.1) ...  
vsftpd start/running, process 6123  
Processing triggers for ureadahead (0.100.0-16) ...
```

- You can enter command to test whether the ftp server install successful

- `$ sudo service vsftpd restart`

```
vsftpd start/running, process 6424
```



# FTP Server Configure

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- Modify vsftpd configuration

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

- The Common Configuration file as follows:

```
listen=YES # 服务器监听
```

```
anonymous_enable=YES # 匿名访问允许
```

```
local_enable=YES # 本地主机访问允许
```

```
write_enable=YES # 写允许
```

```
anon_upload_enable=YES # 匿名上传允许，默认是NO
```

```
anon_mkdir_write_enable=YES # 匿名创建文件夹允许
```

```
ascii_download_enable=YES # 允许使用ascii模式下载
```

```
ascii_upload_enable=YES # 允许使用ascii模式上传
```



# FTP Server Configure

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`dirmessage_enable=YES` # 进入文件夹允许

`xferlog_enable=YES` # ftp 日志记录允许

`local_umask=022` #指定本地用户上传的权限

`connect_from_port_20=YES` # 允许使用20号端口作为数据传送的端口

`anon_umask=000` #指定匿名用户上传的权限

`anon_other_write_enable=YES` #匿名用户其他权限，删除、更名等

■ When you modify the configuration,don't forget to save,what's more,you need to restart the service

```
$ sudo service vsftpd restart
```



# FTP Server Configure

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- There is a new account created by vsftp for anonymous login

- \$ vim /etc/passwd

```
aab:x:1001:1001:White,SHR,,:/home/aab:/bin/bash
ftp:x:106:114:ftp daemon,,:/srv/ftp:/bin/false
"/etc/passwd" 27L, 1327C
```

The ftp account is used by anonymous, and /srv/ftp is the root dir when you login with anonymous username.

The owner of /srv/ftp is root, so when you login using anonymous, upload is not allowed.

We should create a folder with upload privilege. (see next page)



# FTP Server Configure

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- Create a folder with upload privilege

```
1 cd /srv/ftp/ #切换到根目录
2
3 sudo mkdir pub #新建立pub目录做为 匿名用户的上传目录
4
5 sudo chown ftp:ftp pub #为pub目录改其所有者组为 ftp
6
7 sudo chmod -R 777 pub #为pub目录设置权限为全部可读可写可执行
```

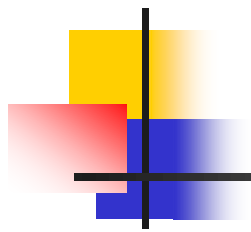
- Now you can use ftp command to connect server

Username:anonymous

Password:随便输

```
student@BUPTIA:~$ ftp 127.0.0.1
Connected to 127.0.0.1.
220 (vsFTPd 3.0.2)
Name (127.0.0.1:student): anonymous
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> ls
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
drwxrwxrwx  3 106      114      4096 May 15 17:37 pub
226 Directory send OK.
ftp>
```





## Case 3:

# Start ftp server in MacOS

# FTP Server Configure

- Input ftp://10.3.255.85 in your browser



用户名:gjxylab

密码:student

# FTP Server Configure

- Download ftpd-mac.zip to you macbook

名称	大小	修改日期
2019-4-18-鐳+磁.txt	0 B	2019/5/14 上午1:49:00
2019-4-25.txt	0 B	2019/5/14 下午9:18:00
best/		2019/5/8 下午9:41:00
desktop.ini	84 B	2019/5/8 下午9:30:00
ftpd-mac.zip	24.7 MB	2019/5/15 上午4:20:00
good	0 B	2019/5/14 上午7:09:00
hello	0 B	2019/5/9 下午7:02:00
ljk1/		2019/5/10 上午7:17:00
morning/		2019/5/14 上午8:04:00
put_test.txt	22 B	2019/5/14 上午2:49:00
puttest.txt	22 B	2019/5/14 上午1:20:00
puttexst.txt	0 B	2019/5/14 下午8:57:00
puttext.txt	0 B	2019/5/14 上午1:19:00
tes □□□□□□□□□□	0 B	2019/5/14 下午11:38:00
test.txt	19 B	2019/5/14 上午7:01:00
test_dir/		2019/5/14 上午7:10:00
test_p.txt	8 B	2019/5/14 下午8:59:00



# FTP Server Configure

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- Unzip by ftpd-mac.zip double click
- Enter the folder
- Start ftp server

```
$ sudo ./ftpd-macos
Password:
2019/05/14 20:39:23 [Info] main.go:50 Loaded config files: config.ini /Users/mrwei/Desktop
/果园实验课/ftpd/custom.ini
2019/05/14 20:39:23 [Info] main.go:123 FTP Server v0.1.1104
2019/05/14 20:39:23   Go Ftp Server listening on 21
[tango] 2019/05/14 20:39:23 [Info] tan.go:148 Listening on http://0.0.0.0:8181
```

(the password is your macbook password)



# FTP Server Configure

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- Use ifconfig to find ip address of you macbook

```
en0: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
    ether 7c:d1:c3:ee:4a:2b
    inet6 fe80::10f1:f806:5bbf:f4ae%en0 prefixlen 64 secured scopeid 0x7
    inet 10.28.163.2 netmask 0xffff8000 broadcast 10.28.255.255
    nd6 options=201<PERFORMNUD,DAD>
    media: autoselect
    status: active
```

- Use you virtual machine to connect ftp server

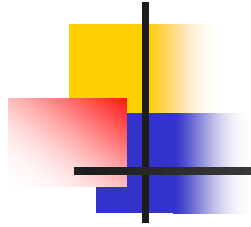
username:admin  
password:123456

```
student@BUPTIA:~/code$ ftp 10.28.163.2
Connected to 10.28.163.2.
220 Welcome to the Go FTP Server
Name (10.28.163.2:student): admin
331 User name ok, password required
Password:
230 Password ok, continue
Remote system type is UNIX.
Using binary mode to transfer files.
```

# FTP Server Configure

- And ftp is the root dir

名称	大小	压缩后大小	类型	安全	修改时间
..(上层目录)					
templates	13.06 KB	5.36 KB	文件夹		2019
public	2.08 MB	984.32 KB	文件夹		2019
ftp	6 KB	1 KB	文件夹		2019
authperm.db	2.16 KB	1 KB	文件夹		2019
key.pem	1 KB	1 KB	PEM 文件		2019
ftpd-windows-x64.exe	13.65 MB	5.94 MB	应用程序		2019
ftpd-macos	13.87 MB	6.08 MB	文件		2019
ftpd-linux-x64	13.90 MB	6.08 MB	文件		2019
ftpd-linux-arm	12.05 MB	5.62 MB	文件		2019
custom.ini	0 KB	0 KB	配置设置		2019
config.ini	1 KB	1 KB	配置设置		2019
cert.pem	1.02 KB	1 KB	PEM 文件		2019
.DS_Store	8 KB	1 KB	DS_STORE 文件		2019



End