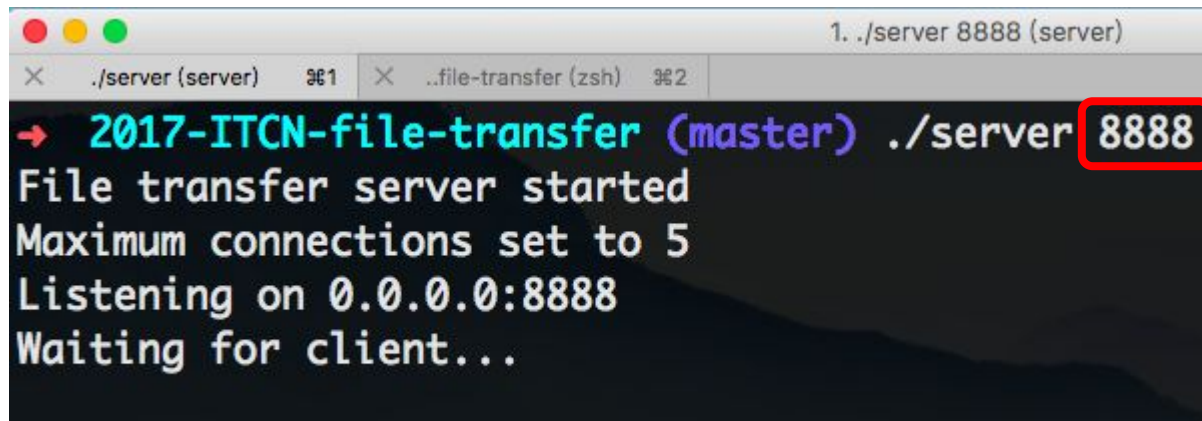


完整流程

STEP 1: Open Server

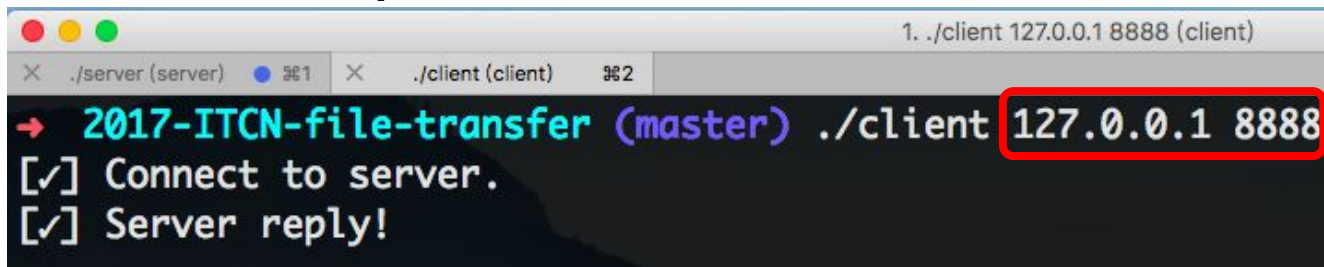


A terminal window titled "1. ./server 8888 (server)". The command prompt shows the user running `./server 8888`. The output of the command is:

```
→ 2017-ITCN-file-transfer (master) ./server 8888
File transfer server started
Maximum connections set to 5
Listening on 0.0.0.0:8888
Waiting for client...
```

設定Server 的Port

STEP 2: Open Client



A terminal window titled "1. ./client 127.0.0.1 8888 (client)". The command prompt shows the user running `./client 127.0.0.1 8888`. The output of the command is:

```
→ 2017-ITCN-file-transfer (master) ./client 127.0.0.1 8888
[✓] Connect to server.
[✓] Server reply!
```

設定要連到的“Server的IP
以及Port”，不是指定
Client的Port

STEP 3: Server回傳File List

```
→ 2017-ITCN-file-transfer (master) ./server 8888
```

```
File transfer server started
```

```
Maximum connections set to 5
```

```
Listening on 0.0.0.0:8888
```

```
Waiting for client...
```

```
[INFO] Connection accepted (id: 4)
```

```
[INFO] Client is from 127.0.0.1:52728
```

```
[INFO] Send hello msg to client
```

```
[INFO] List file to client
```

1. Server會收到Client的連線, 因Client未指定Port, 所以Client的Port為Random Port (圖中的52728)
2. 成功建立連線後, Server會回傳檔案列表, 只需要回傳remote_download資料夾下的三個檔案即可

STEP 4: Client收到Server回傳的File List

```
→ 2017-ITCN-file-transfer (master) ./client 127.0.0.1 8888  
[✓] Connect to server.  
[✓] Server reply!  
-----  
Files on server:  
Lab3_2_spec.pdf  
test.png  
test.txt  
-----
```

Client會收到Server傳回來的file list

STEP 5: Client輸入要下載的檔案名稱

```
Files on server:
Lab3_2_spec.pdf
test.png
test.txt
-----
Enter the filename: test.png
[-] Downloading `test.png` ...
[✓] Download successfully!
-----
```

Client輸入要傳送的檔案名字給 Server

```
[INFO] Connection accepted (id: 4)
[INFO] Client is from 127.0.0.1:52830
[INFO] Send hello msg to client
[INFO] List file to client
[INFO] Client send `test.png` request
```

Server收到Client傳過來的檔案名字之後，會：

1. Server回傳檔案的大小給 Client
2. Server開始執行While迴圈傳送給 Client

同時Client也會收到Server傳過來的檔案大小以及開始執行While迴圈接收檔案

整體流程如下

```
2017-ITCN-file-transfer [master] ⚡ ./client 127.0.0.1 8888
[✓] Connect to server.
[✓] Server reply!
-----
Files on server:
test.png
test.txt
Lab3_2_spec.pdf
-----
Enter the filename: Lab3_2_spec.pdf
[-] Downloading `Lab3_2_spec.pdf` ...
[✓] Download successfully!
-----
Enter the filename: test.txt
[-] Downloading `test.txt` ...
[✓] Download successfully!
-----
Enter the filename: test.png
[-] Downloading `test.png` ...
[✓] Download successfully!
-----
Enter the filename: .exit
[x] Socket closed
```

輸入.exit關閉socket