

# **Distributed Systems, Lab 6**

## **Message-oriented Communication**

**Innopolis University, Fall semester**

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# 1 Introduction

In this lab, we were asked to implement server and client scripts to transfer files.

Client script should accept name of file and server address+port as arguments.

Format of how to run client.py :

```
python3 client.py file ip-address port-number
```

Client script should calculate and print to console the current progress of transferring in percents.

Server should run on AWS and save the file with the same name as it was on the client machine.

Also some points:

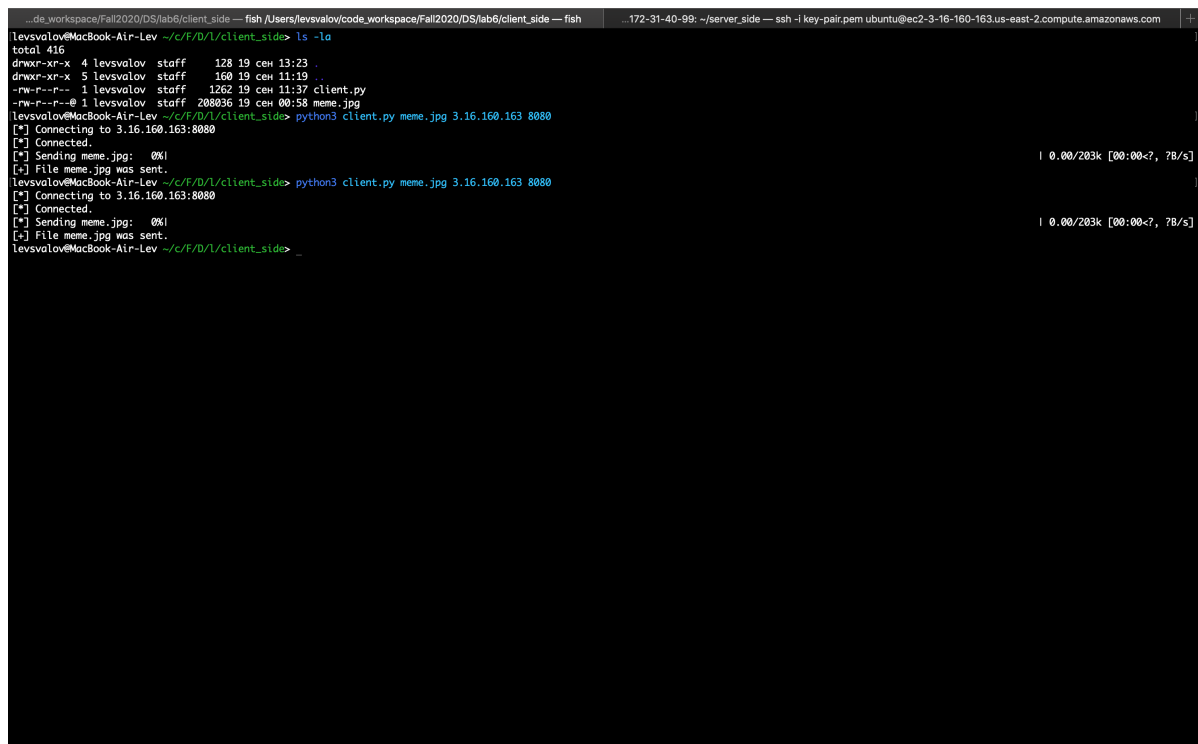
On the screenshot, the server is run on AWS ec-2 instance in the background and it has no parameters to pass.

I specified the port in which the server is listening to - **8080** *You can see it in **server.py***

And, therefore, set up the security group of the instance: add in-bound rule - TCP with this port. It can be any other, just to change it in the **server.py** and add another rule in the security of the instance.

# 2 Screenshots

The screenshot of sending progress from the client side:



```
de.workspace/Fall2020/DS/lab6/client_side — fish /Users/levsvalov/code_workspace/Fall2020/DS/lab6/client_side — fish ..172-31-40-99: ~/server_side — ssh -i key-pair.pem ubuntu@ec2-3-16-160-163.us-east-2.compute.amazonaws.com
levsvalov@MacBook-Air-Lev ~ /c/F/D/1/client_side> ls -la
total 416
drwxr-xr-x  4 levsvalov  staff   128 19 ceh 13:23
drwxr-xr-x  5 levsvalov  staff   160 19 ceh 11:19 ..
-rw-r--r--  1 levsvalov  staff  1262 19 ceh 11:37 client.py
-rw-r--r--  1 levsvalov  staff 208036 19 ceh 00:58 meme.jpg
levsvalov@MacBook-Air-Lev ~ /c/F/D/1/client_side> python3 client.py meme.jpg 3.16.160.163 8080
[*] Connecting to 3.16.160.163:8080
[*] Connected.
[*] Sending meme.jpg:  0%|                                     | 0.00/203k [00:00<7, 78/s]
[*] File meme.jpg was sent.
levsvalov@MacBook-Air-Lev ~ /c/F/D/1/client_side> python3 client.py meme.jpg 3.16.160.163 8080
[*] Connecting to 3.16.160.163:8080
[*] Connected.
[*] Sending meme.jpg:  0%|                                     | 0.00/203k [00:00<7, 78/s]
[*] File meme.jpg was sent.
levsvalov@MacBook-Air-Lev ~ /c/F/D/1/client_side> _
```

screenshot of ls -la output:

```
de.workspace/Fall2020/DS/lab6/client_side — fish /Users/levsvalov/code.workspace/Fall2020/DS/lab6/client_side — fish ..172-31-40-99: ~/server_side — ssh -i key-pair.pem ubuntu@ec2-3-16-160-163.us-east-2.compute.amazonaws.com
ubuntu@ip-172-31-40-99:~/server_side$ [~] 188.130.155.165:55009 is connected.
[+] File received: meme.jpg
[+] 188.130.155.165:55009 is disconnected.
[+] 188.130.155.165:55011 is connected.
[+] File received: meme_copy1.jpg
[+] 188.130.155.165:55011 is disconnected.

ubuntu@ip-172-31-40-99:~/server_side$ ls -la
total 420
drwxrwxr-x 2 ubuntu ubuntu 4096 Sep 19 10:23 .
drwxr-xr-x 6 ubuntu ubuntu 4096 Sep 19 09:56 ..
-rw-rw-r-- 1 ubuntu ubuntu 208836 Sep 19 10:23 meme.jpg
-rw-rw-r-- 1 ubuntu ubuntu 208836 Sep 19 10:23 meme_copy1.jpg
-rw-rw-r-- 1 ubuntu ubuntu 2775 Sep 19 09:57 server.py
ubuntu@ip-172-31-40-99:~/server_side$
```

### 3 Implementation

The source code is stored in this [github private gist](#)