

Distributed System - Practical work 1

TCP File transfer



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1 Protocol

We modify the provided simple chat system to make this file transferring system. In this proof-of-concept we only concerns the file sending from the client to the server.

After the initial request for connection being accepted, the client sends to the server the file's metadata:

- file size, so that the server knows how many packets to receive
- file name, so that the server knows what to save as

The client consequently sends chunks of data until all the file is sent. After that, it prompts to disconnect with the server.

2 System organization

In this system, the client and the server each has a program dedicated for sending or receiving and a file system. The sender program reads the file at the client and send it to the server using TCP/IP protocol. The receiver program at the server writes to a file upon receiving the data.

3 Implementation

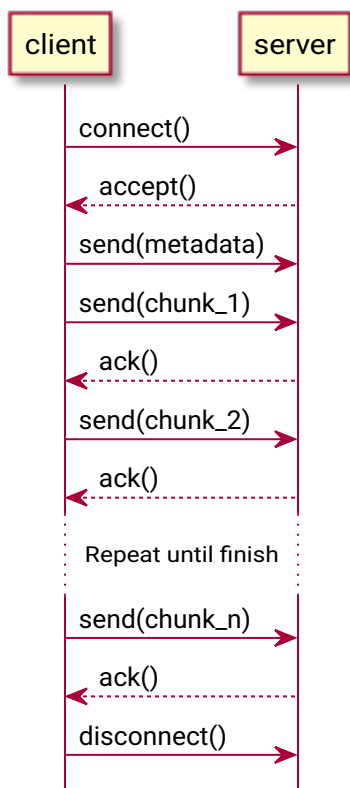


Figure 1: Our protocol for file transferring

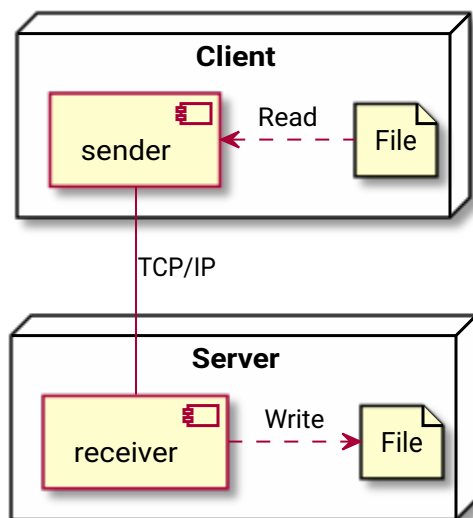


Figure 2: The system organization