

UDP Questions

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1 How to write a chat program (two clients with each other) with UDP?

In the chat program there must be a central server. All clients send messages to the server and the server broadcast these messages to all clients.

While in the two-client chat program, a central server can be a thing of waste. Instead, one of the clients could be the server, and it holds the messages from the two hosts and broadcast it.

As UDP connection is unreliable, we must deal with packet-loss manually, using some techniques in TCP.

2 Can we use the UDP to transfer a file? If so, how?

Of course we can. But we must deal with packet-loss manually. We can divide the file into some fixed-size blocks, and send these blocks one by one. For every block, the file receiver must reply whether it has received it (using sequence number), and the file sender sends the blocks that the receiver didn't receive repeatedly. In other words, we should use some TCP techniques to realize reliable file transfer.