

計網程式 tcp ping B06902051 資工三 呂侑承

How to run it?

make #compile server.c and client.c

./server 8080

./client -n 10 -t 1 ip_of_server:8080 ip_of_server:8080

What I have done?

In client.c:

- 1, Use function getopt() to parse the input and initialize the timeout value and the number of time to ping.
- 2, Get the host names and ports of the servers and use function gethostbyname() to translate host names into ip addresses.
- 3, Create a socket for each server and connect to the servers.
- 4, Use function setsockopt() to set the timeout for receiving data from server.
- 5, Send a message to all servers to tell them how many time it will ping.
- 6, Ping one server a time and use function clock_gettime() to record the time of sending and receiving data.
- 6, Close all the connections.

In server.c:

- 1, Create a socket and bind it to the port given by input.
- 2, Listen to the request from clients.
- 3, Accept one client a time.
- 4, Receive data from client and send it directly back to client.
- 5, After finishing all the ping. Go to step 3.
- 6, Close all the connections.