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Requirements: 4+ Machines, and open ports

How to run:

1. Starting from line 249 (to 282) in DHTServer.java, change the IP Addresses, where to make sure to have Server 1 connect to the IP of Server 2, Server 2 to Server 3, Server 3 to Server 4, and Server 4 to Server 1. Ex: change the insides of [ ] on these lines

connectToNextServer([IP Address of the next one],port);

serverIP = InetAddress.getByName([Current machines IP Address]);

1. On P2PClient.java, from line 53 to 65 (and 76). Change the IP Address to the IP Address of Server 1. Change the ports array to the ports you will be using (ie. Add 1 to the port you are about to use, example, when “java DHTServer 60000 4” (where 60000 is server port and 4 is server ID) is the one you are going to use to create one DHTServer, the ports here should be 60001). Note that it is important to use the same port on all machines (ex: “java DHTServer 60000 [1-4]”) so that all serverPorts will be the same (ex: since java DHTServer 60000 [1-4] is going to be used, we change the serverPorts array to 60001 on all of them). Ex:

InetAddress IPAddress = InetAddress.getByName([IP Address of Server ID 1]);

serverPorts[Any of them] = Port used on creation + 1;

1. On P2PClient.java on lines 130 and 169, change the port to a different port instead of the one used for initializing the DHT and on 2 (ie, if a DHTServer is created via “java DHTServer 60000 [1-4]”, the ports in 2 will be 60001, therefore we should not use port 60000 or port 60001 here).
2. On P2PServer.java, line 96, change “if(socket == [portnum])” to the port used on step 3.
3. Send the files to 4+ machines
4. Run cmd on 4 machines.
5. Compile on all machines
6. Type in “java DHTServer [port] [serverID]”
   1. Ex: java DHTServer 60000 4 on the machine with the IP Address configured earlier
      1. Make sure that you run Server ID 1 last, because Server ID 1 will send a request to Server ID 2. Server IDs 2 to 4 are waiting for responses and when they receive a response they will send a request to their successors.
7. Run another cmd on a different machine (or one of the machines in the DHT ring)
8. Type in “java P2PClient”
9. Type in 1 to get all the IPs
10. If the client has the files on desktop, inform the DHT by typing 2 and entering the file name without the extension.
11. If the client wants to get the files that are in DHT (meaning a P2PClient has done action 2 before), type in 3 and type in the file name.
12. Type in 5 to exit, it will tell all the DHT Servers and the DHT Servers will delete the records.