User Document

Running each component of the system:

PLEASE ENSURE THAT YOU HAVE PLACED THE CODE IN A FOLDER WHERE YOU HAVE WRITE ACCESS, since our file system is persistent.

Step 1: Run super node in the first terminal window.

java -cp ".:./libthrift-0.9.3.jar:./slf4j-api-1.7.14.jar" SuperNodeServer <port number>

Step 2: Start five node servers and node clients (more if needed – max 16) using the following two commands in an alternate fashion on different terminals.

java -cp ".:./libthrift-0.9.3.jar:./slf4j-api-1.7.14.jar" NodeServer <port number> (Command to start the node server)

java -cp ".:./libthrift-0.9.3.jar:./slf4j-api-1.7.14.jar" NodeClient <hostname/ip of super node> <port number of super node> <port number of corresponding node server> (Command to start the node client)

Step 3: Start the client on the twelfth terminal window using the following command.

java -cp ".:./libthrift-0.9.3.jar:./slf4j-api-1.7.14.jar" Client <hostname/ip of super node> <port number of super node>

At this point, *the system has been started* and you get a prompt on the client asking you to either read or write a file to the DHT or to print all server logs.

User input interface:

1) **NodeClient:** Every NodeClient has an option to print out details related to the node it represents.

These details can be seen by giving an input of 1 at any NodeClient.

The details are printed as:

Node ID

Range of keys which should be stored at this node

Predecessor ID

Successor ID

Number of files stored at this node

List of filenames

Finger table

2) **Client:** The client has three options: reading a file, writing a file and printing logs (which contain the tracking information).

The client can read a file by giving an input of 1 at the command line and then entering the file name to be read. If the file is present, the contents will be printed, else an error message would be printed.

The client can write a file by giving an input of 2 at the command line and then entering the file name to be written.

Finally, the client can also request for all logs from the super node by giving an input of 3 on the command line. All logs would be then printed to the console. These logs contain the tracking information for previous reads and writes.

PLEASE DO NOT CLOSE THE CLIENT using Ctrl + C, since we are deleting our persistent file system when the client exits.