Report for Assignment 2 ----- RHT

1. Address already in use: connect

This error occurs due to the property of Sunlab Machine. Sending a message in parallel needs to open a new socket, and then close it after msg was send. But the socket not closed immediately after close() function. It will change its state to Wait for 240s and then close. During the 240s, if the total socket on the computer larger than the maximum, which usually between 1024-5000, this error occurs. Therefore, the maximum operation during my test is 1000.

2.RMI and Chord are very powerful tools during my assignment.

3. Huge disadvantage of 2PC commit.

When the operation number become large, the deadlock multiput like mutilput (a, A, b, B, c, C) & mutilput (c, A, a, B, b, C). These two operations will fail several times because they blocked each other. Three or more operation like that will make my system inefficient. That’s a reason why the throughput in my system seems low. To avoid that, I suggest using Paxos to replace 2PC.

4. Remember to release the lock if the multiput operation failed.

5. Data in this assignment is the larger the better. Small dataset will easily generate conflict and decrease the performance.

Cun Shi

4/11/2019