Design Document MP3

Assumptions

- All servers and syncers are running before you run a client
- Slaves are run before masters
- Please run all servers with id 1, 2, 3

Client-Coordinator Relationship

- For this relationship, when a client is run, it populates the DB in the coordinator based on what the client put in its command line with port numbers and ids. The coordinator then return the port and ip based on the cluster the user was assigned to.

Client-Master

- Client master was pretty similar to MP2, I just had to add functionality to update the necessary following files and the all_clients/total_clients files.

Master-Slave

- I got the master-slave interaction working. There were two aspects to this. The first was that if the master is down for the length of two heartbeats, it should return the respective slave port instead for the client.
- The second aspect was that the master needed to keep the slaves updated with the current information. I got that working for everything except the timeline. The way I did it was by checking the server type, if the server was a master, then I would call that same function with the slave stub.

Follower Syncer

- For this relationship, when a client is run, it populates the folllowerSyncer DB in the coordinator based on what the client put in its command line with port numbers and ids. The follower syncer was implemented with a function that checks if any file from its cluster was modified. So for the different ending types such as “_all_clients.txt”, “_follwoing.txt” , “_t.txt”. I would deal with those files as needed. If I needed access to any client which wasn’t in the cluster I called the syncer stub with the other Followers Syncer port information.

Note: I am able to pass the first 3 test cases, but I couldn’t finish the timeline. At one point I got it functioning to the point where it was working but my computer crashed I did not have the time to recreate that again. There is functionality for the timeline it just does not work as I want it to. I have spent 70+ hours on this MP.