Verification Document
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In order to verify the correctness of the program we run the experiment on the star and linear topologies.
To run ... in **./src/**

sudo make clean
sudo make
./setupTestFiles.sh 9 2 200 2
This creates hosts 0-9, replicates each file on 2 random hosts, creates 200 files of sizes 1-200kb, and places the input (to query the files on a input file ../topologies/topo/input_2.txt) for host 2 input. All the input files are placed in ./topologies/topo/input_*.txt (in the parent directory) and the test files are created in ./src/tests/test*/file_xxx.bin

Now the experiment is ready to run. In order to run it Mininet must be installed. Run **sudo ./experiment (star/linear)**. Depending on the topology desired. The output files are stored in ./topologies/topo/out_x.txt.

In order to run the experiment with larger number of replicated files the second parameter can be changed to 4 or to 7 and the final parameter can be changed to have multiple hosts run the queries.

We run a total of 12 experiments with 200 queries each. 6 on each topology. 3 with a single host making queries and 3 with half the hosts making concurrent queries. For each of the 3 there is one with the files replicated on 20%, 40% and 70% of hosts randomly. The experiments take about 10 mins each

./setupTestFiles.sh 9 2 200 2
sudo ./experiment star
./setupTestFiles.sh 9 4 200 2
sudo ./experiment star
./setupTestFiles.sh 9 7 200 2
sudo ./experiment star
./setupTestFiles.sh 9 2 200 6
sudo ./experiment star
./setupTestFiles.sh 9 4 200 6
sudo ./experiment star
./setupTestFiles.sh 9 7 200 6
sudo ./experiment star

./setupTestFiles.sh 9 2 200 2
sudo ./experiment linear
./setupTestFiles.sh 9 4 200 2
sudo ./experiment linear
./setupTestFiles.sh 9 7 200 2
sudo ./experiment linear
./setupTestFiles.sh 9 2 200 6
sudo ./experiment linear
./setupTestFiles.sh 9 4 200 6
sudo ./experiment linear
./setupTestFiles.sh 9 7 200 6
sudo ./experiment linear