

In order to verify the correctness of the program we run the experiment on the star and linear topologies.

To run ... in the project directory

sudo make clean

sudo make

cd src

./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