COP 5615: DISTRIBUTED OPERATING SYSTEMS

PROJECT - 2 REPORT

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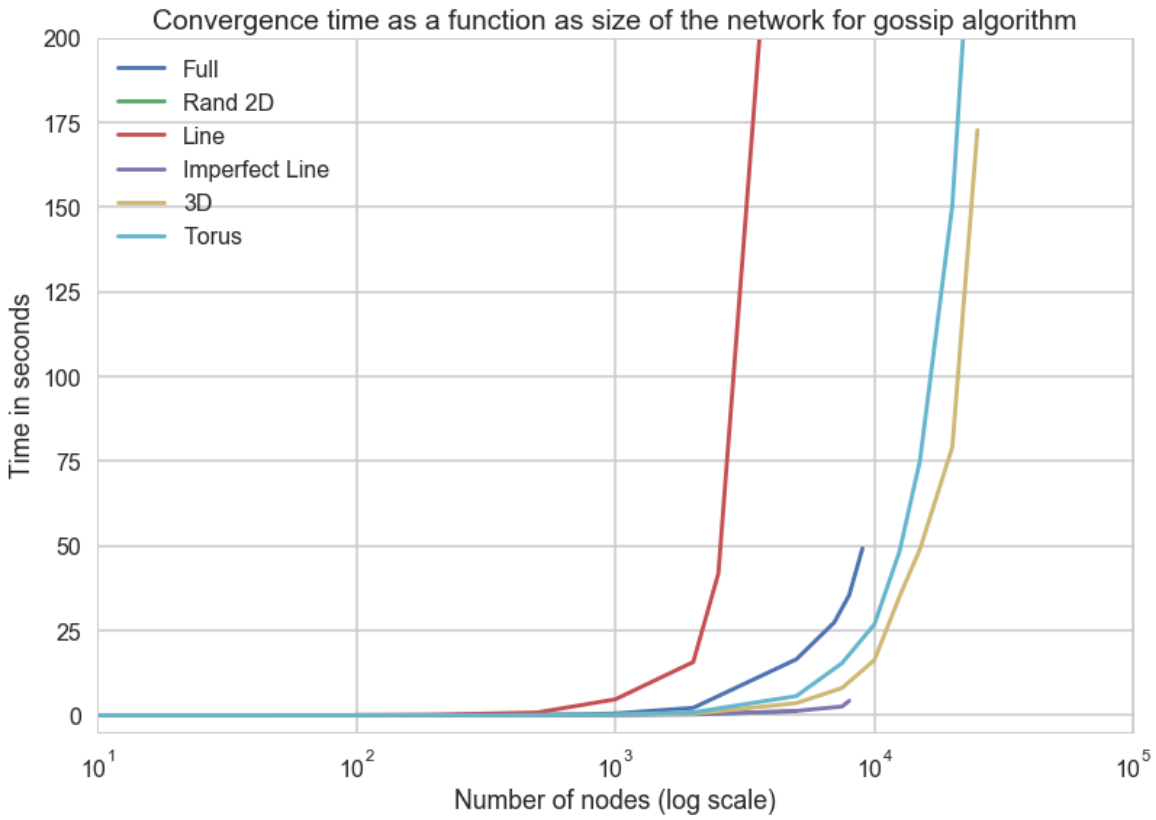
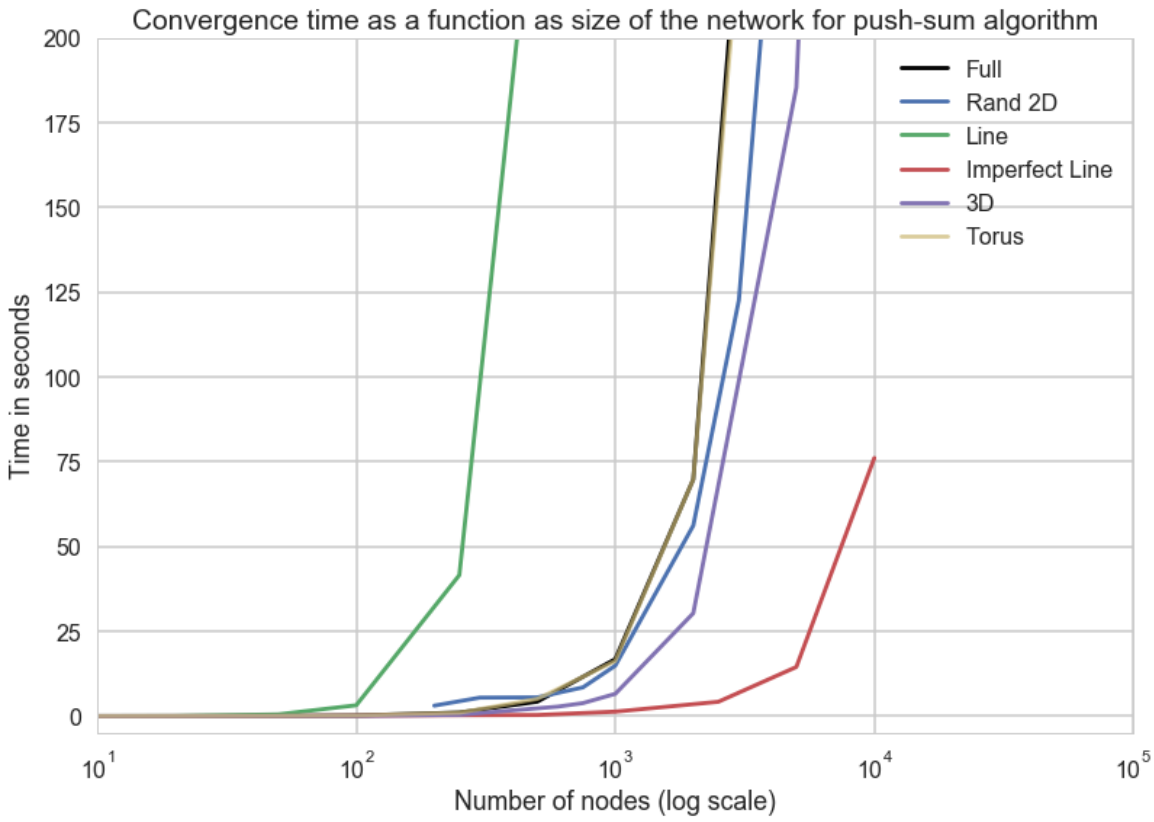
Graphs





Convergence time

Convergence time was measured by taking the time difference between starting the algorithm and the time which after each node has received the rumor once.

Observations

- In push sum algorithm, imperfect line was converging faster, compared to other topologies, which is opposite of what was expected. The algorithm converging time for full network and Torus are almost the same.

- In gossip algorithm, for Random 2D topology, there are certain number of nodes for which there are no neighbors, since there may be a possibility of randomly distributed nodes to have no neighbors and the algorithm always converges for number of nodes greater than 300.

- Imperfect line works the best for both gossip and push sum algorithms and can generalize if the number of nodes is very large.