

## Team Members

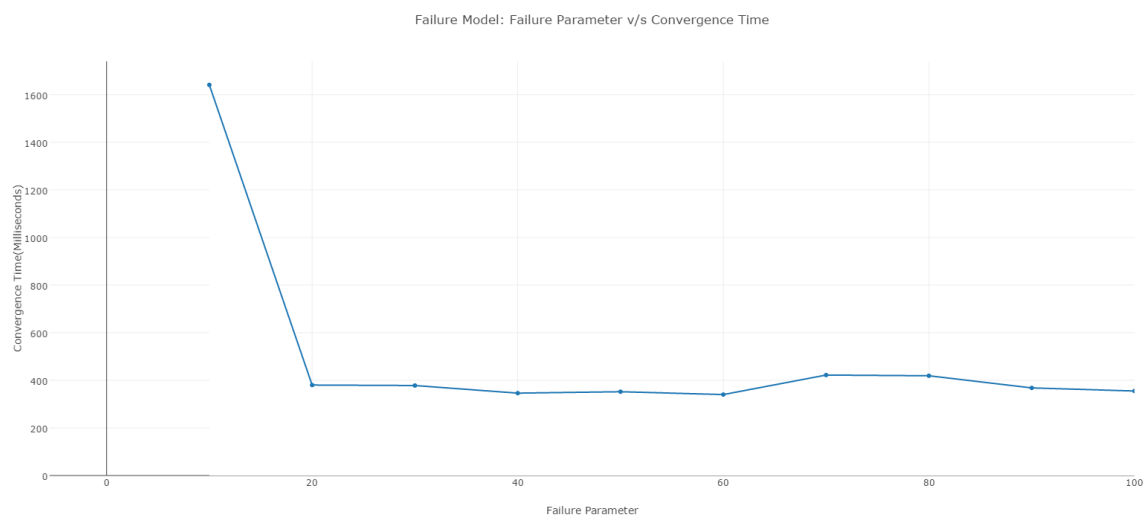
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## Failure Model Implementation

The failure model works by taking an input parameter from the user. The failure parameter then kills those nodes whose ID value is a multiple of the failure parameter. Thus higher the failure parameter lower the number of nodes will be killed. A scheduler is used to initiate the kill process.

We tested the failure model for a network of 512 nodes arranged in the Full topology for the gossip algorithm. We got the following graph



## Observations

- 1) We see an inverse relation between the failure parameter and the convergence time.
- 2) The convergence time remains stable for high values of the failure parameter but for low values we see the convergence time spike.
- 3) Eventually for very small parameter values we start seeing frequent failures to converge. As a large number of nodes are not working.
- 4) Line topology is severely affected by loss of nodes to failure.