

# Report-Bonus

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In fail mode, I will kill a random node and restart it after certain time and then I kill another node. To start fail mode, please add another parameter after algorithm, which should specify restart time in millisecond.

I treated the restart time as a parameter and points I chose to test are 10, 50, 100, 200, 350, 400, 450, 500, 600, 800, 1000, 1200, 1400, 1600, 1800, 2000 (ms). When testing, I set the number of node to 144, and chose gossip algorithm. I measured all converge time of all restart time.

First graph shows the relation between converge time and restart time. We can see as the restart time grows, system takes long time to converge for all topologies.

Second graph shows the relation between standard deviation of converge time and restart time. We can see as the restart time grows, converge time becomes more unstable.

Through above observation, we can see fast recovery of node is helpful when using gossip algorithm to spread message.



