

Input :

Run-main gossip #nodes topology algorithm errornodes

Sbt : run-main gossip 15 full gossip 1

Output:

[info] Running gossip 10 full gossip 1

program running on a 'full' topology that has '10' nodes communicating through 'gossip' algorithm

Somebody is trying to kill me!!

Somebody is trying to kill me!!

Somebody is trying to kill me!!

[INFO] [10/04/2015 23:34:19.707] [AsynchronousGossip-akka.actor.default-dispatcher-7]

[akka://AsynchronousGossip/user/0] kill this node 0

Somebody is trying to kill me!!

[INFO] [10/04/2015 23:34:19.707] [AsynchronousGossip-akka.actor.default-dispatcher-12]

[akka://AsynchronousGossip/user/7] kill this node 3

[INFO] [10/04/2015 23:34:19.707] [AsynchronousGossip-akka.actor.default-dispatcher-5]

[akka://AsynchronousGossip/user/6] kill this node 8

[INFO] [10/04/2015 23:34:19.707] [AsynchronousGossip-akka.actor.default-dispatcher-3]

[akka://AsynchronousGossip/user/1] kill this node 9

Somebody is trying to kill me!!

Somebody is trying to kill me!!

[INFO] [10/04/2015 23:34:19.708] [AsynchronousGossip-akka.actor.default-dispatcher-13]

[akka://AsynchronousGossip/user/8] kill this node 2

[INFO] [10/04/2015 23:34:19.707] [AsynchronousGossip-akka.actor.default-dispatcher-9]

[akka://AsynchronousGossip/user/9] kill this node 5

Somebody is trying to kill me!!

[INFO] [10/04/2015 23:34:19.780] [AsynchronousGossip-akka.actor.default-dispatcher-12]

[akka://AsynchronousGossip/user/4] kill this node 6

[INFO] [10/04/2015 23:34:20.019] [AsynchronousGossip-akka.actor.default-dispatcher-13]

[akka://AsynchronousGossip/user/7] message count reached at my node10

[INFO] [10/04/2015 23:34:20.109] [AsynchronousGossip-akka.actor.default-dispatcher-7]

[akka://AsynchronousGossip/user/4] message count reached at my node10

[INFO] [10/04/2015 23:34:20.149] [AsynchronousGossip-akka.actor.default-dispatcher-12]  
[akka://AsynchronousGossip/user/1] message count reached at my node10

Somebody is trying to kill me!!

[INFO] [10/04/2015 23:34:20.710] [AsynchronousGossip-akka.actor.default-dispatcher-11]  
[akka://AsynchronousGossip/user/7] kill this node 7

[INFO] [10/04/2015 23:34:20.710] [AsynchronousGossip-akka.actor.default-dispatcher-3]  
[akka://AsynchronousGossip/user/1] kill this node 4

Somebody is trying to kill me!!

Somebody is trying to kill me!!

[INFO] [10/04/2015 23:34:21.723] [AsynchronousGossip-akka.actor.default-dispatcher-10]  
[akka://AsynchronousGossip/user/1] kill this node 1

Total elapsed time:2036

shutting down...

[success] Total time: 18 s, completed Oct 4, 2015 11:34:21 PM

We tested for gossip with full,line,3D,imp3D and pushsum with full,line 3D,imp3D .

In send,receive methods,we pass count of error nodes,errorlist that contains indices of killed nodes.  
createError picks up a random value and kills that node.This is scheduled for every 1000 milliseconds.  
To avoid kill messages to the already killed node,an error list is maintained.

Observation:

As the nodes are killed randomly,if there is no case of overlap,network would be shut down quickly

Corner case – when all the other nodes are killed or converged,it sends kill signal to itself ,then whole network is collapsed.

Here it takes less time for shutdown because if node is killed,it will remove the major part of network.  
So,the time taken is in contrast with the main project (without error).

Gossip:

	Nodes crashed	imp3D	Full	imp3D	Line
Time (horizontal)	1	5300	5500	6500	
	5	6500	6600	5700	
	10	7000	5300	6500	