Project 3

README

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Algorithms and Topologies included:

Pastry Protocol

The executable included in the project can be run as follows:

project3 numNodes numRequests

:: ./project3   numNodes   numRequests

Failure models were also implemented in this project and can be run as follows:

project3 numNodes numRequests percentage

where our parameter for analyzing failure of nodes is percentage of total failed nodes in network (1-50%)

:: ./project3   numNodes   numRequests percentage(1..80)

Largest network   we were able to deal with for our protocol : 10000 nodes

Average number of hops for 10000 nodes = 3.22

Number of Nodes	Log (Num of nodes, base:16)	Average No of Hops	Average No of Hops (for Failure of 25%)
1	0	0	0
5	0.580482024	0.8	0.94
10	0.830482024	0.9	0.95
20	1.080482024	0.95	0.97
40	1.330482024	1.25	1.23
80	1.580482024	1.54	1.42
160	1.830482024	1.83	1.57
320	2.080482024	2.04	1.815
640	2.330482024	2.29	1.97
1280	2.580482024	2.51	2.21
2560	2.830482024	2.75	2.365
10000	3.321928095	3.22	2.724