

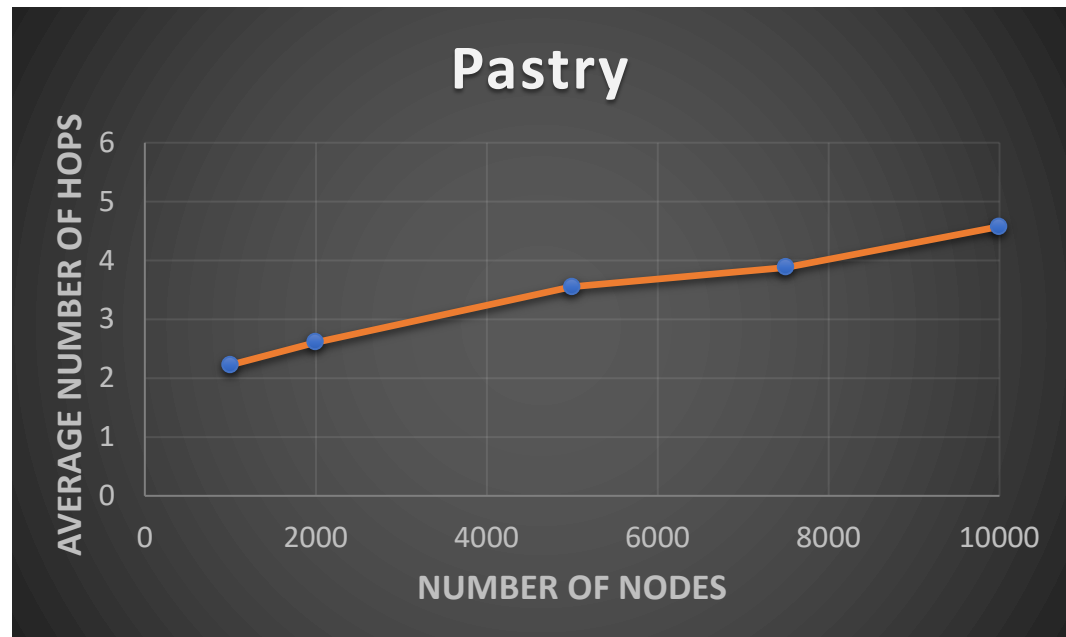
1. Command Line:

- a. `dotnet fsi --langversion:preview project3.fsx [NUMBER OF NODES] [NUMBER OF REQUESTS]`

2. Results

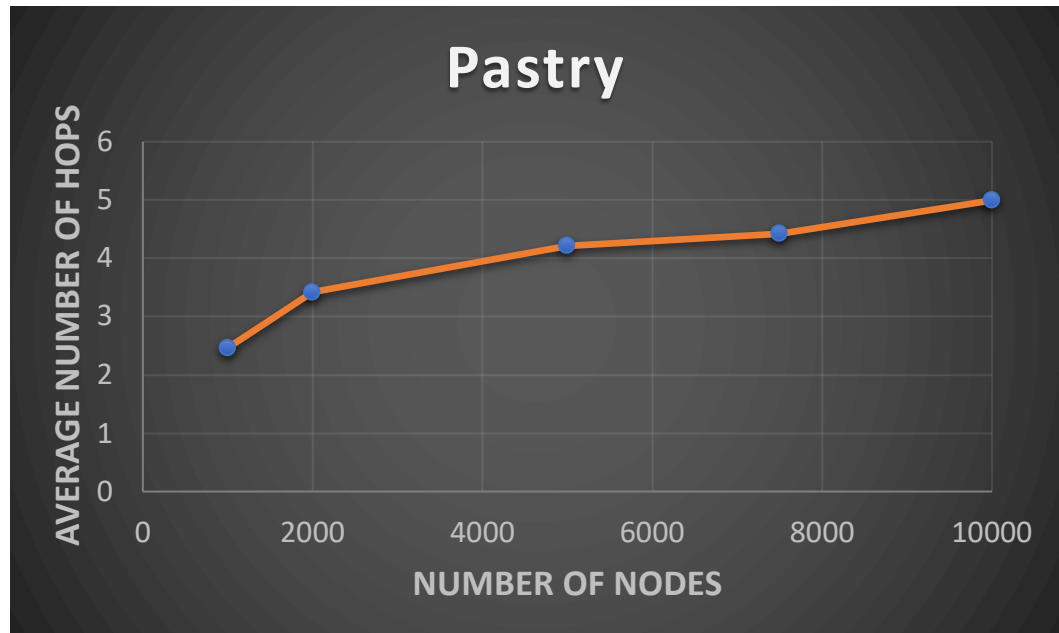
- a. $b = 3$, $|L| = 16$, Number of requests = 2

Number of Nodes (N)	$\log_2 N$	Average number of hops
1000	3.322	2.223
2500	3.763	2.608
5000	4.096	3.551
7500	4.291	3.882
10000	4.429	4.575



- b. $b = 3$, $|L| = 16$, Number of requests = 3

Number of Nodes (N)	$\log_{2^b} N$	Average number of hops
1000	3.322	2.464
2500	3.763	3.421
5000	4.096	4.215
7500	4.291	4.424
10,000	4.429	4.994



3. Discussion

- According to the paper, $\lceil \log_{2^b} N \rceil$ is the expected maximum number of hops required to route in a network containing N nodes. The above table shows the expected results.
- I was able to implement the Pastry protocol for a network containing 10,000 nodes.