Distributed Hash Tables

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1 Solution Overview

1.1 Constructing a Ring

Every node of the ring sends 500 queries for random keys. As we can see the figure **??**, the number of hops is evenly distributed between 0 and 63 in a ring of size 64. This is as expected: Since the nodes are randomly distributed around the ring, and the search only takes place in a linear fashion, the search will have on average n/2 hops, and every possible number of hops from the minimum to the maximum will have the same chance of occuring.

Search Performance without Fingers

A plot with the y-axis labeled "Searches" ranging from 0 to 600 (in increments of 100) and the x-axis labeled "Hops" ranging from 0 to 60 (in increments of 10). The plot area is empty.