Improvement and performance analysis on statistical selection algorithms

ABSTRACT

Over the years, the distributed database has been developed so fast that there's a need to develop an effective selection algorithm for it. Loo and Choi has proposed a statistical selection algorithm with the same objective and run in multicast / broadcast environment that has been proved that it is the best among others in terms of the number of messages needed to complete the searching process. However, this algorithm has a high probability of failure. A few improvements have been done to this original algorithm. This new algorithm is developed based on the simulation of the real multicast environment. Three modifications have been added in the new algorithm to solve the problem. Two performance measures have been conducted for the purpose of performance analysis between original and new algorithm.