EFFICIENT IMPLEMENTATION OF SORTING ALGORITHMS ON ASYNCHRONOUS DISTRIBUTED-MEMORY MACHINES

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Abstract

The problem of merging two sequences of elements which are stored separately in two processing elements (PEs) occurs in the implementation of many existing sorting algorithms. We describe efficient algorithms for the merging problem on asynchronous distributed-memory machines. The algorithms reduce the cost of the merge operation and of communication, as well as partly solving the problem of load balancing. Experimental results on a Fujitsu AP1000 are reported.

Comments

Only the Abstract is given here. The full report appeared as [2]. For related work, see [1].

References

[1] A. Tridgell and R. P. Brent, *An Implementation of a General-Purpose Parallel Sorting Algorithm*, Technical Report TR-CS-93-01, Computer Sciences Laboratory, ANU, February 1993, 24 pp. rpb140.

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