Abstract

Recently a great deal of attention has been paid to the design of hierarchical shared memory cluster system. Cluster computing has made hierarchical computing systems increasingly common as target environment for large-scale scientific computations. This paper proposes hierarchical shared memory cluster architecture with load balancing and fault tolerance.
Hierarchies of shared memory and caches structure the architecture. The hierarchical load balancing approach focuses on reducing the redistribution cost. The fault tolerant model is adopted to build highly available clusters in hierarchical shared memory clusters. Performance analysis and results reveal that hierarchical shared memory clusters performs much better creating a reliable hierarchical network cluster system with high scalability.

Reference


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<th>Key words</th>
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<td>Cluster Controller</td>
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<td>Cluster Scheduler</td>
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<td>Data</td>
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- Levels of hierarchy
- Recovery levels