Abstract

This work reports an efficient scheme of electing a leader, in a fully connected distributed system, having n number of nodes. In the proposed scheme, the system state is modeled using Cellular Automata. Each node is initialized with status information. This information has to be maintained by the nodes at all times so that they are aware of the current working coordinator in the system. The proposed scheme requires only $O(n)$ messages for decision making.
An Efficient Cellular Automata based Leader Election Scheme

Coordinator Selection Scheme in Distributed System, in Proceedings of CSC, 2009, pp. 304-310, 2009

Index Terms

Computer Science

Information Systems

Keywords

Distributed systems cellular automata