Abstract

Checkpointing is one of the commonly used techniques to provide fault tolerance in distributed systems so that the system can operate even if one or more components have failed. However, mobile computing systems are constrained by low bandwidth, mobility, lack of stable storage, frequent disconnections and limited battery life. Hence checkpointing protocols which have fewer checkpoints are preferred in mobile environment. In this paper, we propose a minimum-process coordinated Checkpointing algorithm for checkpointing deterministic distributed applications on mobile systems. We eliminate useless checkpoints as well as blocking of processes during checkpoints at the cost of logging anti-messages of very few messages during Checkpointing. We also try to minimize the loss of checkpointing effort.

References


Index Terms

Computer Science
Algorithms
Keywords