A Comparative Study on Snapshot Protocols for Mobile Distributed Systems

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Abstract

In MDS (Mobile Distributed Systems), we come across some issues like: low bandwidth of wireless channels, mobility, and lack of stable storage on mobile nodes, limited battery power, disconnections and high failure rate of mobile nodes. Fault Tolerance Techniques enable systems to perform tasks in the presence of faults. In case of a fault in DS, snapshot enables the execution of a program to be resumed from a previous consistent Global State rather than resuming the execution from the beginning. Thus, a lot of useful processing amount is lost because of the fault is significantly condensed. Coordinated global Snapshot is an effective FTT (Fault Tolerant Technique) in DS (Distributed Systems), as it avoids the domino effect and require minimum storage requirement. In this paper, we will study the accessible snapshot compilation schemes for DS & MDS. Then, a comparative analysis of the different schemes will be performed.

References


L. Lamport, "Time, clocks and ordering of events in a distributed system,"
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Index Terms

Computer Science
Distributed Systems

Keywords
Fault tolerance  Coordinated snapshot  Message logging and Mobile Distributed Systems