Abstract

Mobile agent become very popular and attracted more importance these days due to the exponential growth of internet applications. The design of fault tolerance system become very challenging due to limited bandwidth of wireless network, mobile host mobility, limited local storage, limited battery power and handoff. A distributed system is a collection of independent entities to solve the problem that cannot be solved individually. A distributed system is susceptible to failure when it does not meet its specifications. Fault tolerant techniques enable systems to perform tasks even in the presence of faults. To deal with failure, a checkpoint is taken at specific place in a program at which standard process is interrupted specifically to
preserve the status information. To recover from a failure one may restart computation from the last checkpoints, thereby avoiding repeating computation from the previous consistent global checkpoint. A mobile computing system is a distributed system where some of processes are running on mobile hosts (MHs), whose location in the network changes with time. The number of processes that take checkpoints is minimized to 1) avoid awakening of MHs in doze mode of operation, 2) minimize thrashing of MHs with checkpointing activity, 3) save limited battery life of MHs and low bandwidth of wireless channels. In this paper we provide an overview on Fault Tolerance in Mobile Distributed Systems (MDS).

References

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Fault Tolerance Approach in Mobile Distributed Systems

Environment: Design and Trade-off Analysis,


Index Terms

Computer Science
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Domino Effect  Rollback Recovery  Mobile Host  Mobile Support Station  Consistent Global Checkpoint