

Event Ordering and Mutual Exclusion in Distributed System

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April 13th, 2012

1. Does the converse condition of Clock Condition hold? Describe briefly why or why not.
2. (a). In Lamport's distributed mutual exclusion algorithm, condition [L1] for determining if a process should be granted resource can hold concurrently at several processes. Why then is [L1] needed to guarantee mutual exclusion?

(b). Prove by contradiction that Lamport's distributed mutual exclusion algorithm is fair. In other words, prove that the requests for the resource are executed following the total ordering.