عنوان مقاله:

Multicast Data Replication Approach for Improving Fault Tolerance in Mobile Ad hoc Networks

محل انتشار:

کنفرانس بین المللی یافته های نوین پژوهشی درمهندسی برق و علوم کامپیوتر (سال: 1394)

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خلاصه مقاله:

Multicast data replication provides a possible solution for improving data accessibility in highly dynamic and fault prone mobile ad hoc environments. Our novel multicast data replication approach operates in a self-organizing manner where the network nodes that has unit host detector construct a connected dominating set (CDS) based on the topology graph by collecting information from neighboring nodes using multicast if gathered data from neighbors have two non-adjacent neighbors then use that virtual backbone for efficient data replication, data search and routing. In this study, we compare our proposed approach with SCALAR and evaluate it in average hop counts and successful delivery ratio with different node numbers and speeds.It is shown that the average hop counts increased but with falling rate and 20 percent successful delivery ratio is achieved, so it is demonstrated that PM act with respect to fault tolerance improvement, power consumption and load balancing is occurred.

کلمات کلیدی:

mobile ad hoc network, data replications, fault tolerance, multicast, CDS