Abstract

Mobile Ad hoc Networks (MANET) has gained substantial research interest, owing to its easy deployment and inexpensiveness. However, the security of the network is the major concern, because of the absence of the central authority. This work addresses these issues by incorporating the trust mechanism in the cluster formation and routing. The chief node is selected on the basis of four trust parameters such as energy, packet delivery ratio, neighbour count and mobility. The chief node kicks off the misbehaving nodes during the process of routing. The proposed work is proved to be resilient against replay and sybil attacks. The performance of this work is evaluated in terms of several popular performance metrics and the system proves its efficacy.


**Index Terms**

Computer Science  
Networks

**Keywords**

MANET, trust, routing, replay attack, sybil attack.