

Abstract

Trust is emerging as an important aspect of relationships in social networks. A mobile ad-hoc network (MANET) is a peer-to-peer wireless network where nodes can communicate with each other without the use of infrastructure such as access points or base stations. Ad hoc network is a collection of wireless mobile devices or nodes. In ad hoc network broadcast/communication range and resources like battery power and computational resources are limited. Mobile Ad-hoc network consists of a large number of relatively low and high mobile nodes communicating in the network using radio signals. Trust management is a one of the techniques used to manage data/ information exchange amongst (between) nodes.

Routing is always the most significant part for any networks. In MANET each node should not only work for itself, but nodes should be cooperative/join with other nodes. In such a network of independent nodes, misbehaviour due to less stability or less trusted intention/purpose could significantly reduce the performance of MANET.

Trust management is an important aspect of mobile ad hoc networks. We focus on trust management framework, which is proposed to deal with *reachability* and *stability* of nodes and increase the performance, in general and particularly message delivery in MANETs. A trust-based system can be used to track misbehaving nodes, spot them and isolate them from routing and provide reliability in the MANET. We propose a Trust based Route Discovery with hop by hop algorithm to provide trust based solution (trusted path) for the communication/packet delivery. The simulation result of the proposed method i.e., Trust Based Hop by Hop Algorithm as compare to AODV suggest better performance of the method over the latter.

Key words:

Ad Hoc, MANET, Trust, Stability, Trust-Based Routing.