Abstract

Mobile Ad-hoc network is a situate of portable nodes that correspond with wireless links and communication acknowledged out without any central control or fixed communication. The dynamic topology of MANETs allows nodes to join and leave the network at any point of time. This generic characteristic of MANET has rendered it vulnerable to security attacks. The black hole attack is one of such security risks. In this attack, a malicious node fallaciously advertise shortest path to the destination node with an intension to disrupt the communication. In this paper, we intend a solution to the black hole attack in one of the most prominent routing algorithm, ad-hoc on demand distance vector (AODV) routing, for the MANETs. The anticipated scheme uses Watchdog mechanism to detect malicious node with usage of local information of intermediate node and propagates the information of black hole node to all other node in network. The simulation results show the efficiency of anticipated scheme in presences of black hole node.

References


Index Terms

Computer Science
Networks

Keywords

ad hoc networks, black hole, AODV, security, routing.