Technique for Detection and Isolation of Black Hole Attack in MANETs

Abstract

The infrastructure less property in ad hoc networks poses great challenges in the functionality of these networks. Therefore, we refer to a wireless ad hoc network with mobile nodes as a Mobile Ad Hoc Network. In AODV route request, route reply and route error are the control messages. When source node wants to establish route to the destination nodes, source node first sends route request control packets to their adjacent nodes. When adjacent node receives route request packets if node has the route to the destination node it will reply back to source node with route reply message. Source node select best route on the basis of hop counts and on the basis of sequence number. The black hole attack is the active type of attack in which malicious node commit that it has path to destination but it does not have path to destination. In this work, technique of blacklist and clustering is proposed which detect and isolate malicious nodes from the network.

References

Index Terms

Computer Science    Wireless

Keywords
MANETs, AODV, Black Hole Attack, Security