Abstract

The proposed paper is enhanced version of our previous paper" A cryptographic approach towards Black Hole Attack Detection" accepted in CNSA 2012 gives solution for false reply from a node and confirms reply is coming from destination node in Black Hole attack. This paper proposed an algorithm for detecting malicious node that drops packet and the node that gives false reply to the source node. In this work detection of false reply by a malicious node and also detecting a node that drops the packets. Detection in both the cases is performed locally using the previous node of the attacker. This paper uses two acknowledgements for detecting malicious node. By using this algorithm the security mechanism overhead would be decreased, throughput also increased and reduced end-to-end delay. The graphs at the result section shows improvement in network performances in the presence of black hole attacks and it can do so with a negligible level of additional overhead.

Index Terms

Computer Science Networks
Keywords

Mobile Ad hoc Networks Routing, Intruder Detection; DOS; Black Hole Attack