Abstract

Mobile ad hoc network (MANET) is a self configuring network in which mobile nodes are connected by wireless link. Communication in MANET is done with the help of cooperation of nodes in the network. Due to its intrinsic properties like dynamic network topology, open medium, lack of central monitoring system, these are vulnerable to several attacks. Out of different attacks, packet dropping attack is considered as one of the serious threats as in this kind of attack, malicious node invariably drops the packets which are supposed to be forwarded to destination. Thus, it degrades network performance. In this paper, a distributed packet dropping attack (PDA) detection methodology named NAODV, is proposed. Detection and isolation of malicious node is based on cooperative participation of nodes involved in communication based on TRUST level of the nodes. TRUST levels of the nodes are dynamically updated based on their qualitative participation in detection of malicious nodes. Performance of this methodology is evaluated through simulation in different network scenarios and results are compared with two existing methodologies.
NAODV-Distributed Packet Dropping Attack Detection in MANETs


Chin-Yang Henry Tseng, "Distributed Intrusion Detection Models for Mobile AdHoc Networks", DISSERTATION on Submitted in partial satisfaction of the requirements for the degree of Doctor Of Philosophy in Computer Science in the office of graduate studies of the University of California Davis


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NAODV-Distributed Packet Dropping Attack Detection in MANETs


Index Terms

Computer Science

Security
Keywords
MANET  PDA  distributed packet dropping attack  TRUST  CONFIDENCE  decision tree.