Abstract

The active operational environment of Mobile Ad hoc NETwork (MANET) makes it exposed to a variety of network attacks. Thus reducing the vulnerability is becoming a top priority. Wireless networks are susceptible to many attacks, including an attack known as the wormhole attack, has become a challenging work. The wormhole attack is very powerful and preventing this attack has proven to be very difficult. This paper addresses the aforementioned gap by introducing a new co-operative, relative approach, based on Reference Broadcast System (RBS). To improve network scalability and throughput, we propose the concept of the relative velocity between sender & the receiver node of the MANET. So that our proposed scheme has three mechanisms namely, AODV (Ad hoc on demand distance vector protocol) for routing, Principle of RBS for threshold setting and ACK, for reliability of communication, are combined to detect wormhole attacks in ad hoc networks.
- Nguyen, D. Q. , & Lamont, L, &quot;A Simple and Efficient Detection of Wormhole Attacks&quot;. IEEE Conferences New Technologies, Mobility and Security (pp. 1-5). NTMS &apos;08.
- Rouba El Kaissi, Ayman Kayssi, Ali Chehab and Zaher Dawy,&quot;Dawsen: a defense mechanism against wormhole attacks in wireless sensor networks&quot;;, IN Second International Conference on Innovations in Information Technology (IIT&apos;05).
A Novel Approach for Wormhole Detection in MANET


Index Terms

Computer Science       Wireless Security

Keywords

AODV   MANET   wormhole attack   relative velocity   RBS