Abstract

Mobile Ad hoc network (MANET) is a collection of mobile nodes that form a temporary dynamic network without any fixed infrastructure and centralized administration. In this type of network it is difficult to have the reliable & secure communication in MANET. In this paper we proposed a scheme against wormhole attack in MANET. In this research we proposed Wormhole attack Intrusion Detection as well as prevention Security Scheme (WIDPS) against wormhole attack using the IDP nodes. Using the proposed algorithm for detecting the wormhole node, IDP node will analyze the behavior each nodes based on packets send by the nodes, will detect the node with abnormal behavior. After that we prevent wormhole attack using broadcasting the particular identification (ID) of attacker so that no node in network replies to that request and secure the mobile ad-hoc network communication. Through our proposed work we provide reliable as well as secure communication in network from wormhole attack and measure the network performance on the basis of network parameter like routing load, throughput and packet delivery ratio.
WIDPS: Wormhole Attack Intrusion Detection and Prevention Security Scheme in MANET

References

- Umeshkumarchaurasia and Varshasingh, "MAODV: Modified Wormhole Detection AODV Protocol", IEEE Sixth International Conference on Contemporary Computing (IC3), pp. 239 - 243, 8-10 August 2013
- http://www.isi.edu/nsnam/ns/.

Index Terms

Computer Science

Security
Keywords
MANET  WIDPS  routing  security  performance metrics  wormhole attack