Abstract

Mobile Ad hoc NETwork (MANET) is one of the most important and unique applications. MANET is a collection of wireless mobile nodes forming a network without using any existing infrastructure. In recent years, the use of mobile ad hoc network has been widespread in many applications, security has a most important service in Mobile ad hoc Network compared to other networks. The open medium and wide distributions of nodes responsible for various types of malicious attacks. The solutions for traditional networks are usually not sufficient to provide efficient Ad-hoc operations. This paper proposes and implements a new intrusion detection system named Cryptography Enhanced Adaptive Acknowledgment (CEAACK) specially designed for MANET and compares all existing approaches. And enhancing security level of MANETs based on security attributes the various algorithms, namely RSA and DSA also introduced. The results will be positive performances of WATCHDOG, TWOACK and AACK in the cases of receiver collision, limited transmission power and false misbehavior report.

Index Terms

Computer Science  Security
Keywords

Mobile Ad Hoc NETworks (MANETs), Intrusion Detection System (IDSs), Digital Signature, digital signature algorithm (DSA), Cryptography Enhanced Adaptive ACKnowledgment (CEAACK).