Energy-efficient intrusion detection in wireless sensor network

ABSTRACT

The use of Wireless Sensor Networks (WSNs) has developed rapidly in the last decade. Deploying tiny sensors with limited battery power in open and unprotected environment and dynamic topology in WSNs raises security issues in this kind of networks. Attacks can occur from any direction and any node in WSNs, so one crucial security challenge is to detect networks' intrusion. There are several algorithms for building Intrusion Detection Systems (IDS) based on different WSN routing protocol classifications with respect to energy-efficient manner. This paper provides an overview of the research on IDS in WSNs, focusing on routing protocol classification depending on network structure with respect to energy consumption as a crucial parameter in these kinds of networks. In addition, some simulation manners are reviewed.

Keyword: Wireless sensor network; Intrusion detection system; Hierarchical routing; Flat-based routing; Location-based routing