Abstract

In modern era of technology wireless networks are widely used for data communication throughout the world. Mobile Ad hoc Network (MANET) is one of the type in which each device works as an independent node and also as a router for forwarding data between nodes of the MANET. MANET has no centralized or authorized body to protect the communication from intruders and considered as vulnerable to attacks due to its distributed nature and lack of infrastructure. Cluster based distributed and cooperative intrusion detection system (IDS) provides security to some extent. The header node in a cluster is a key component because if compromised the whole cluster will be destroyed. We propose a system that uses two heads per cluster with cooperative IDS mechanism. These head nodes not only cooperate for finding intrusion for cluster members but also protect each other against intrusion. In result more permanent cluster will appear which give birth to more consistent network connection. The performance metric of our work is based on how smoothly and securely the cluster operates when one header is compromised. The proposed system increases the detection rate and decreases the traffic and therefore offers the efficient utilization of power in mobile nodes.

References


Index Terms

Computer Science
Mobile Networks

Keywords
IDS MANET Cluster Header Node Mobile node