Abstract

The wireless links between the nodes together with the dynamic-network nature of ad hoc network, increases the challenges of design and implement intrusion detection to detect the attacks. Traditional intrusion detection techniques have had trouble dealing with dynamic environments. In particular, issues such as collects real time attack related audit data and cooperative global detection. Therefore, we are motivated to design a new intrusion detection architecture which involves new detection technique to efficiently detect the abnormalities in the ad hoc networks. In this paper we present the architecture and operation of an intrusion detection technique in Mobile Ad hoc NETwork (MANET). The proposed model has distributed and cooperative architecture. The proposed intrusion detection technique combines the
Distributed and Cooperative Hierarchical Intrusion Detection on MANETs

flexibility of anomaly detection with the accuracy of a signature-based detection method. In particular, we exploit machine learning techniques in order to achieve efficient and effective intrusion detection. A series of simulation and experimental results demonstrate that the proposed intrusion detection can effectively detect anomalies with low false positive rate, high detection rate and achieve higher detection accuracy.

Reference

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Index Terms

Computer Science Wireless

Key words

MANET Intrusion detection CPDOD CP-KNN
distributed and cooperative architecture intrusion detection

Conformal Prediction