An Effective Intrusion Detection System for Routing Attacks in MANET using Machine Learning Technique

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Abstract

Wireless communication is widely adopted and application oriented technology There are a huge literature about Mobile Ad-hoc network is available. In these studies, the ad hoc network has two major issues security and performance. In this paper a feasible and adoptable solution is introduced for enhancing security in MANET. The presented work utilizes the network characteristics and their behavioral difference during attack. Using the attack and normal network behavior a machine learning algorithm is trained and the malicious patterns are distinguished according to the new network samples. The proposed machine learning based ad hoc network security is implemented using NS2 simulator and the performance of the system is evaluated in terms of metrics viz. throughput, packet delivery ratio, end to end delay and energy consumption. According to the obtained results the performance of the proposed secure network is optimum and adoptable.

References

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Computing (WCMC), PP. 1-24.


Index Terms

Computer Science Networks

Keywords

MANET NS-2 Packet Delivery Ratio Routing Overhead End to End Delay Energy Consumption

Machine Learning Technique