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

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


- Weichao Wang, Bharat Bhargava, Yi Lu and Xiaoxin Wu, “Defending Against Wormhole Attacks in Mobile Ad-hoc Networks”, Wiley Journal of Wireless Communication and Mobile
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Index Terms

Computer Science
Networks

Keywords

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

   Energy Consumption

   Machine Learning Technique
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