Enhancing the Performance of Network Intrusion Detection System by Combining Naïve Bayes, Decision Tree and K-Nearest Neighbors Algorithms

Abstract

Protecting the hostile network environment is a very difficult task. Although, there is no way to protect the network for hundred percent accuracy, so many researches tried to achieve the best security mechanisms for long time. Among the security mechanisms, network intrusion detection system is one of the well-known. The performances of the network intrusion detection systems that are developed have produce so many false alarm. To improve this false alarm rate this research combines three algorithms which are Naïve Bayes, Decision Tree and k-NN. The results found from the experiment showed that the combined algorithm improve the accuracy of the network intrusion detection system by up to 5%.

References


Index Terms

Computer Science Networks

Keywords

Network Intrusion, Network Security, Intrusion Detection System