

عنوان مقاله:

The Effect of Feature Reduction in Implemented Intrusion Detection Systems by Support Vector Machine

محل انتشار:

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نویسنده:

Mohammad Hassan Nataj Solhdar - *Department of Electrical Engineering, Shohadaye Hoveizeh University of Technology, Dasht_e Azadegan, Khuzestan, Iran*

خلاصه مقاله:

This paper proposes a method of applying Support Vector Machines to network-based Intrusion Detection System (SVM IDS). Intrusion detection system is a tool to diagnose attacks in computer networks which can help to protect network security. Today, the developed IDSs are a process of network attacks classification to prevent attacks with high intrusion diagnosis precision. The diagnosis process was established based on this fact that the harmful activities are different from the normal system. Intrusion Detection is a completely sophisticated process. There are various types of network attacks in the popular network security scenarios. Some of them have been known and some others have been non-known. Therefore, designing and implementing IDSs have been considered as an important research topic to protect network security. SVMs have been used as a classic model diagnosis tool. SVM IDS was learned with training set and tested with test sets to evaluate the performance of SVM IDS to the novel attacks. And we also evaluate the importance of each feature in dataset to improve the overall performance of IDS. In this research the machine learning was used to increase the precision and accuracy of intrusion detection and the feature reduction based on Fisher Score was used to increase the speed of Performance, the result be compared with each other's. The experimental results revealed that the approach had a significant effect on the minimization of the computational .and time complexity. New model implements by NSLKDD dataset

کلمات کلیدی:

SVM, NSLKDD, feature reduction, IDS, Fisher

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