Abstract

Cyber attack is becoming a critical issue of organizational information systems. A number of cyber attack detection methods have been introduced with different levels of success that is used as a countermeasure to preserve data integrity and system availability from attacks. The classification of attacks against computer network is becoming a harder problem to solve in the field of network security. This paper describes a Subset Selection Decision Fusion method to choose features (attributes) of KDDCUP 1999 intrusion detection dataset. Selection algorithm for distributed cyber attack detection and classification is proposed. Different types of attacks together with the normal condition of the network are modeled as different classes of the network data. We proposed Parallel Support Vector Machine (PSVM) algorithm for detection and classification of cyber attack dataset. Support Vector Machines (SVM) are the classifiers which were originally designed for binary classification. The classification applications can solve multi-class problems. Result shows that PSVM gives more detection accuracy for classes and comparable to false alarm rate.
Cyber Attack Classification based on Parallel Support Vector Machine

References

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Cyber Attack Classification based on Parallel Support Vector Machine


Index Terms

Computer Science
Emerging Trends in Technology

Keywords
Distributed Cyber Attack Detection And Classification
Subset Selection Decision Fusion
Parallel Support Vector Machine
Kddcup'99 And Confusion Matrix