Abstract

The internet and local area networks are growing larger in recent years. As a great variety of people all over the world connecting to the internet, they are unconsciously encountering the number of security threats such as viruses, worms and attacks from hackers. Therefore, intrusion detection is becoming a more and more important technology which follows up network traffic and identifies network intrusion such as anomalous network behaviors, unauthorized network access, and malicious attacks to computer systems. Mostly, researches use 41 features to create new methods for classifying network intrusion. Rarely researches focus on feature selection. This paper uses the knowledge of factor analysis to group features, and then picks the main feature in each group representing for main features. The way reduces only 13 main features from 41 features (31.71 %). It is obvious that the reducing features can reduce processing time. With 494,020 records dataset from KDD Cup 1999, the experimental results show that the novel feature selection gain the accuracy greater than or equal to the accuracy from the whole features.