ABSTRACT

Information security and resource availability on computer network from a lot tipe of intrusions always become interesting to people, especially network administrator. A lot number of data to be audited and increasing grow of intrusions, become important task to administrator. Data mining has an ability to extract informations and patterns from amount of data that never seen before. By applying concept and method of data mining to computer network activity data, we will get the informations and also patterns of those data, a detection model. Detection model used by intrusion detection system (IDS) as a tool filtering computer network activitiy data, to distinguish between normal connection or bad connection (intrusion). It is a challenge to develop detection model that has an ability to detect intrusions accurately. This project implemented repeated incremental pruning to produce error reduction (RIPPER) algorithm to develop misuse intrusion detection model. RIPPER is one kind of sequence covering algorithm that produce set of rule as a model (rule-based classifier). Feature selection and resampling is used to produce training data in representatif form. In the analysis and testing phase, detection model produced by RIPPER give accurate rate 92.91256%. And with minimum CPE rate is 0.1964, smaller compared with the winner of KDD Cup 1999 which CPE rate is 0.2331.

Keywords : intrusion detection system, misuse detection model, RIPPER, feature selection, resampling.