ABSTRACT

At present the development in the world of network technology is very rapid and internet usage is increasing, with the increase in internet users, the number of network needs also increases. The risk of increasing the number of network needs makes network traffic more complex and the risk of attacking protected data from a server.

Because of the many threats that occur on computer networks, it requires a system that can secure the computer network. Intrusion Detection System or commonly called IDS is a system that monitors network traffic for suspicious activities and gives a warning when the activity is found.

To solve this problem, in this Final Project do analyze the IDS process using KDD99 as a dataset using genetic algorithms as a selection feature and KNN algorithm as classification and evaluation. Based on the tests performed, the selection feature uses a genetic algorithm to get the 18 best features to be used from 41 features, with an average accuracy of 84,17%, and classification using the KNN algorithm with accuracy of *training* data 99,98% , data *testing* with average 97,52% and the average manual calculation parameter k=1 78,57%, k=3 76,40%, k=5 76,86%, k=7 76,71%, k=9 77,57%.

Keyword : *Intrusion Detection System, IDS, Genetic Akgorithm, GA, Security Network, Network Computer*. K-NN, Dataset, KDD99.