Abstract

IP MULTIMEDIA SUB-SYSTEM (IMS) is a standard Next Generation Networking, which is capable of clicking-convergence of voice, video, image, data and web-based technologies. IMS is able to provide service QoS, Charging, Service Integration better than the previous generation. Development continues on IMS security. There are many types of attacks that can be done on the IMS. One approach in dealing with security issues is by Intrusion Detection System(IDS). P-CSCF is the IMS component that is vulnerable to attack. The attack is carried out on the P-CSCF will decrease the performance of IMS. DOS attack is one of the thread that can degrade the quality of QOS for authorized clients. The author tries to use traditional Network IDS mechanism based anomaly detection with the P-CSCF acts as IDS.

In this thesis, the author try to implement ids based on genetic programming and k-nearest neighbor algorithm, and analyse which ids that gives better level of attack detection accuracy and detection time required.

kNN is considered good because it has good accuracy level and fast detection time required.

Keyword: *IMS, IDS, P-CSCF, Genetic Programming, K-Nearest Neighbour*.