

## ABSTRACT

The current Internet which is based on TCP/IP protocol have been used widely on our daily routines. LAN or host connection to the internet increases possibilities of security holes which can be protected physically before. According to G. J. Simons information security is how we can avoid cheating or at least detects any policy violation in an information based system, where the information itself doesn't have any physical means. Therefore, it is important to have a security system which able to detect, analyze and react against any intrusion without decreasing provided service performance.

Firewall is an internetwork gateway that restricts data communication traffic to and from one of the connected networks. Its function to controlling access to and from a network by analyzing the incoming and outgoing packet headers (IP address & port) and letting them pass.

Current security system implementations lack one critical ability. The ability to react intelligently. They are very happy to warble, chirp and scream that there has been an intruder, but they don't DO anything

This final assignment design and implement pass or blocking the packets using AIRIDS method. AIRIDS (*Automated Intelligently Reactive Intrusion Detection System*). A method of network security to perform an integrated network security system of IDS, Firewall, Database and Monitoring system. Protecting network with intelligently respond using the principles of rule-based AI to select which signatures and data sources are used in making decisions. The decisions used by Adaptive Firewall to change its policy whether the packet coming from network must be blocking or passing through the firewall.

The implementation of the AIRIDS and Adaptive firewall improved performance of network security.