

## ABSTRACT

Traffic anomaly is a phenomenon on the internet that is becoming a hot topic research for now. Some of traffic anomaly is DDoS attack and flashcrowd. The attack of DDoS was more increased today. Because of that, there was many research on traffic anomaly detection system. It has many method to detect the traffic anomaly, one of that is by using network statistic method which is using the long range dependence.

On the research that have been done before, most researchers only use one analysis method. So that can only detect DDoS attacks without any supporting analysis that can make the better accuracy. On this research the method has three analysis it is distribution analysis, windowing analysis, and LRD analysis. So this method can have better accuracy.

The result of this research shows that the three kinds analysis have good performance. The result of distribution analysis show that the DDoS dataset always have bigger data rate value. In windowing analysis also can detect DDoS based on its residual, because the DDoS dataset always have bigger residual value than the other. The LRD analysis also have good performance. This can be seen from hurst eksponen value corresponding to existing theory where the estimated hurst eksponen value between 0,5 and 1 for normal and flashcrowd dataset testing and out of that range for DDoS dataset testing.

Keywords: traffic anomalies, DDoS, Long Range Dependence