Abstract

Traffic could be an information that moves from the transmitter to the receiver. Network traffic cannot be ascertained accurately when will the circumstance increase beyond normal limits. The circumstances beyond normal limits it is called the Anomaly Traffic. To knowing, detecting and predicting an abnormal or anomaly can be achieved using the Holt-Winters Algorithm. The calculation of Holt-Winters Algorithm itself constituted by the Exponential Smoothing. The level of success in this Anomaly detecting is diverse, and many other factors affect the final results. So, to knowing the accuracy value from the Holt-Winters Algorithm needs to recalculate that could be using the Bayes Theorem.

This research predicting the Anomaly in a network using the Holt-Winters Algorithm. This Algorithm is using exiting Anomaly data on that network to recount and to predict when will the Anomaly comes again. The results of Holt-Winters Algorithm will be recalculate using the Bayes Theorem to search the accuracy value of predicting the Anomaly.

The Holt-Winters Algorithm itself is collecting the Anomaly data on a network traffic based on the service with the prediction results of ftp is 91%, ftp-data is 89% and telnet is 88%. By calculating the results of Holt-Winters Algorithm using probability calculation, the Bayes Theorem for 0,51 ftp, 1 for ftp-data and 0,48 for telnet.

Keywords: *Traffic, Anomaly Prediction, Holt-Winters Algorithm, Exponential Smoothing, Bayes Theorem*