ABSTRACT

Communication data is an important thing, especially data communication in an education environment like collage of ITS Surabaya. Data of traffic network at ITS Net server represent an important indication to know whether success or failure of the network. Data of traffic change proportional with the change of time. So they can be conducted by understanding and study concerning this data. From understanding of data of traffic this earns us-use to be optimal in the case of network design, performance mainstray and also evaluate ability of network.

Network traffic modeling represents one of methods to know characteristic of network. In this study, Traffic data modeling is done by using ARIMA (Autoregressive Integrated Moving Average). Traffic rate measurement is performed by CACTI, then data converted into a numerical form by using Matlab and afterwards modeled by Minitab, furthermore model is raised to be validated by comparing data of measurement result to one of modeling result. Research also discusses the modeling of traffic and its relation to maximum data.

The research finding shows 1824 data events in 7 models. There are three models that most dominant, namely ARIMA (1 0 0), and (2 0 0). ARIMA (0 0 1). ARIMA (1 0 0) representing most appropriate modeling for traffic of network data. Maximum traffic that happened have modeling of ARIMA (1 0 0). ARIMA modeling validation process is done by comparing the measurement data with the data generation model. Graph ECDF (Empirical Cumulative Distribution Function) to see a real shift and change in pattern between the data of the generation with the original data measurements can be seen on the graph series models.

Keywords: Network, Server, ARIMA
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