Traffic behavior of local area network based on M/M/1 queuing model using Poisson and exponential distribution

ABSTRACT

Nowadays, Local Area Networks (LAN) are one of the most popular networks, and the LAN performance is very important for operators. The LAN method has been applied as an essential infrastructure of numerous companies and organizations for a long time. This study aims to evaluate the M/M/1 queuing model in LAN Based on Poisson and Exponential Distribution and compare the traffic behavior of these Distributions in terms of some essential parameters. Moreover, it also aims to design and implement a model to perform the M/M/1 queuing model with different metrics and finally analyze the results to evaluate traffic behavior of M/M/1 queuing model for Poisson and Exponential Distribution in LAN.

Keyword: Exponential distribution; Local area network; M/M/1 queuing model; Poisson distribution