

ABSTRACT

The TULT Building provides internet services, but the service still needs to be improved because some users experience network problems. At the same time, some users do not experience network problems when using the service. From the user's perspective, this situation creates a sense of injustice among fellow users. Therefore, bandwidth management is needed. In this study, the Simple Queue and Queue Tree methods are used. The Simple Queue is a single queue limiting method that limits upload and download connections. The Queue Tree is a limiting method that utilizes the mangle feature to mark targets. The selection of these methods is due to the difference in configuration between the two. In this study, an analysis of Quality of Service parameters is performed on both methods. The results of this study conclude that the internet network quality in the TULT Building is less optimal because the Throughput values are not evenly distributed, with the highest value being 4446k and the lowest value 982k, and abnormal Packet Loss fluctuations with the highest value of 88.79% and the lowest value of 4.10%. However, there are no issues with the Delay and Jitter values. The Queue Tree method is appropriate for the TULT Building because it has an average Throughput value of 3333k, Packet Loss less than 1%, Delay of 2.02 ms, and Jitter of 2.48 ms. In addition, the operation of the Queue Tree method is beneficial when the internet network in the TULT Building is experiencing peak traffic.

Keyword- Bandwidth Management, Simple Queue, Queue Tree, Quality of Service, TULT Building.