

Table 11: Proposed Bandwidth Allocation

Section	IP Address / Network	The proposed bandwidth
Web server	172.16.22.8/30	1 Mbps
Lan office	172.16.20.0/24	1 Mbps
Gedung C	172.16.21.0/24	1 Mbps
Hotspot1	192.168.201.0/24	256 Kbps
Hotspot2	192.168.202.0/24	256 Kbps
Hotspot3	192.168.203.0/24	256 Kbps
Hotspot4	192.168.204.0/24	256 Kbps
Total Bandwidth		4 Mbps

the average percentage of packet loss of 2%, it can be concluded from the results of the delay values in the category is excellent and the category of Packet Loss is very good .

Jitter: Based on the peak jitter value in accordance with the table version TIPHON as standardization for peak jitter value. If categories the peak jitter is 0 ms then the category is very good, if categories the peak jitter is 75 ms then the category is nice, if categories the peak jitter is 125 ms then the category is medium and if categories the peak jitter is 225 ms then the category is poor.

The results from measurements of peak jitter value for the LAN network devices with the smallest value of 0.5 ms, while the largest value of 8.4 ms with an average value of 5.2 ms jitter. From the calculation of the value of jitter degradation categories according TIPHON version is nice.

Factors Influencing QoS:

- a. Damping
- b. Distortion and Noise

Troubleshooting: The proposed bandwidth allocation table follows Table 11.

6 CONCLUSION

1. The quality of service parameter consisting bandwidth, throughput, delay, jitter and packet loss are very influenced for bandwidth optimization.
2. The factors that can influenced QoS of bandwidth usage are attenuation, distortion and noise
3. The Capacity of bandwidth provided that influaced to QoS in a busy times can increase internet access significantly, therefore to get good QoS needed bandwidth management Queue Simple wheareas suitable with Internet Service Provider and blocked some internet access that can used much bandwidth.