

Table 1: Bandwidth allocation in progress

Bagian	IP Address / Network	Bandwidth
Server SIMKEU	172.16.22.0/30	1 Mbps
Server SIPMAYA	192.168.2.0/24	2 Mbps
Server SIPMAYA_2	172.16.22.4/30	1 Mbps
LAN Office	172.16.20.0/24	3 Mbps
Gedung C	192.168.10.0/24	1 Mbps
Hotspot_1	192.168.201.0/24	128 Kbps
Hotspot_2	192.168.202.0/24	512 Kbps
Hotspot_3	192.168.203.0/24	256 Kbps
Hotspot_4	192.168.204.0/24	512 Kbps
Total Bandwidth		9.384 Mbps

4.2 Internet Bandwidth

The results obtained in the analysis bandwidth speed internet access while using internet bandwidth pegukuran site <http://bm.speed.net.id> obtained results where the value of the total Internet bandwidth which means it will acquire 2,28 Mbps download speed at 291.55 kB/s where the formulation speed downloading (kB/s) is the ratio of the speed of internet access per 8 bits.

$$\text{Download Speed (Kbps)} = \frac{\text{Kecepatan Akses Internet (kbps)}}{8 \text{ Bit}} - \frac{2.28 \text{ Mbps}}{8 \text{ Bit}} = 291.55 \text{ kB/s}$$

4.3 QoS (Quality of Service)

Quality of Service (QoS) is the ability of a service to ensure performance and is a parameter to measure the quality of a service. Institute for Standardization ITU-T defines QoS as influence that determines the overall performance level of user satisfaction. By using software or tools Axence NetTools.

4.3.1 Delay and Packet Loss

The researchers trying to see the connection status on the youtube.com site, the ~~facebook.com~~ site, and the binahusada.ac.id site. The results display Delay and Packet Loss as follows Table 2, Table 3, Table 4.