

## DAFTAR GAMBAR

|                                                            |    |
|------------------------------------------------------------|----|
| Gambar 2. 1 Topologi Bus .....                             | 9  |
| Gambar 2. 2 Topologi Ring.....                             | 9  |
| Gambar 2. 3 Topologi Star .....                            | 9  |
| Gambar 2. 4 Topologi Mesh.....                             | 10 |
| Gambar 2. 5 Router .....                                   | 11 |
| Gambar 2. 6 Switch.....                                    | 12 |
| Gambar 2. 7 Mikrotik.....                                  | 12 |
| Gambar 2. 8 PCQ .....                                      | 15 |
|                                                            |    |
| Gambar 3. 1 OPD KP3B .....                                 | 17 |
| Gambar 3. 2 Sebelum dilakukanya Management Bandwidth ..... | 18 |
| Gambar 3. 3 Flowchart manajemen bandwidth .....            | 22 |
| Gambar 3. 4 Topologi jaringan .....                        | 23 |
| Gambar 3. 5 Lantai 1.....                                  | 25 |
| Gambar 3. 6 Lantai 2.....                                  | 25 |
| Gambar 3. 7 Lantai 3.....                                  | 26 |
| Gambar 3. 8 Diagram Alir.....                              | 29 |
| Gambar 3. 9 PCQ Rate.....                                  | 30 |
| Gambar 3. 10 Diagram Alir Simple Queue .....               | 31 |
| Gambar 3. 11 Skenario Metode Simple Queue .....            | 32 |
| Gambar 3. 12 Diagram Alir Queue Tree .....                 | 33 |
| Gambar 3. 13 Skenario metode Queue Tree .....              | 34 |
| Gambar 3. 14 Diagram alir HTB .....                        | 35 |
|                                                            |    |
| Gambar 4. 1 Login Winbox.....                              | 36 |
| Gambar 4. 2 Konfigurasi Interface .....                    | 37 |
| Gambar 4. 3 Konfigurasi Ip Address .....                   | 38 |
| Gambar 4. 4 Konfigurasi Ip Address ether 3 .....           | 38 |
| Gambar 4. 5 Konfigurasi DHCP Client add .....              | 39 |
| Gambar 4. 6 Konfigurasi DHCP Server .....                  | 39 |
| Gambar 4. 7 konfigurasi firewall (srcnat).....             | 40 |
| Gambar 4. 8 Konfigurasi Firewall (Masquarade) .....        | 40 |
| Gambar 4. 9 Konfigurasi PCQ (add) .....                    | 41 |
| Gambar 4. 10 PCQ Upload.....                               | 41 |
| Gambar 4. 11 PCQ Download.....                             | 42 |
| Gambar 4. 12 Konfigurasi Simple Queue.....                 | 43 |
| Gambar 4. 13 Konfigurasi Simple Queue (Advanced) .....     | 43 |
| Gambar 4. 14 konfigurasi mangle .....                      | 44 |
| Gambar 4. 15 Konfigurasi Queue Tree.....                   | 44 |
| Gambar 4. 16 Mark Connection general HTB.....              | 45 |
| Gambar 4. 17 Mark Connection action HTB.....               | 46 |
| Gambar 4. 18 Mark packet General HTB.....                  | 46 |

|                                            |    |
|--------------------------------------------|----|
| Gambar 4. 19 mark packets Action HTB ..... | 47 |
| Gambar 4. 20 Grafik Throughput .....       | 49 |
| Gambar 4. 21 Grafik Packet Loss.....       | 50 |
| Gambar 4. 22 Grafik Delay .....            | 52 |
| Gambar 4. 23 Grafik Jitter.....            | 53 |