

DAFTAR GAMBAR

| | |
|---|----|
| Gambar 2. 1 Skema Load Balancing[4]..... | 6 |
| Gambar 2. 2 Perbandingan arsitektur jaringan tradisional dan SDN[8] | 7 |
| Gambar 2. 3 Arsitektur Jaringan Software Defined Network[9] | 8 |
| Gambar 2. 4 OpenFlow[11] | 9 |
| Gambar 2. 5 Isi Flow table pada OpenFlow switch[12] | 9 |
| Gambar 2. 6 Perbandingan switch konvensional dengan P4-defined switch[15] | 10 |
| Gambar 2. 7 Protocol-Independent Switch Architecture PISA[15]..... | 11 |
| Gambar 2. 8 Arsitektur P4Runtime..... | 12 |
| Gambar 3. 1 Gambaran umum sistem..... | 15 |
| Gambar 3. 2 Implementasi arsitektur kebutuhan sistem | 16 |
| Gambar 3. 3 Flowchart Perancangan Sistem | 17 |
| Gambar 3. 4 Flowchart Pengujian Sistem..... | 18 |
| Gambar 3. 5 Implementasi topology sistem P4 Round Robin dan P4 IP Hash | 20 |
| Gambar 3. 6 Optimasi Algoritma IP hash..... | 21 |
| Gambar 3. 7 Proses Algoritma IP Hash | 22 |
| Gambar 3. 8 Struktur mymetadata pada (a) IP hash dan (b) Round Robin..... | 23 |
| Gambar 3. 9 Proses Compile Program (a)P4 Round robin dan (b) P4 IP hash ke BMv2 switch..... | 23 |
| Gambar 3. 10 Proses Konfigurasi BMv2 Switch..... | 24 |
| Gambar 3. 11 Running Mininet | 25 |
| Gambar 3. 12 Hasil Simulasi Load Balaing P4 | 25 |
| Gambar 4. 1 Hasil Pengukuran <i>Throughput</i> | 28 |
| Gambar 4. 2 Hasil Pengukuran Response Time | 29 |
| Gambar 4. 3 Hasil Pengukuran Request Loss..... | 30 |
| Gambar 4. 4 Hasil httpperf sistem P4 Round Robin..... | 31 |
| Gambar 4. 5 Hasil httpperf istem P4 IP hash..... | 32 |
| Gambar 4. 6 Distribusi P4 Algoritma Round Robin..... | 33 |
| Gambar 4. 7 Fairness Index P4 Algoritma Round Robin | 34 |
| Gambar 4. 8 Hasil Running P4 Round Robin..... | 34 |
| Gambar 4. 9 Distribusi P4 Algoritma IP Hash..... | 35 |
| Gambar 4. 10 Fairness Index P4 Algoritma IP hash..... | 35 |
| Gambar 4. 11 Hasil Runiing P4 IP hash | 36 |