

## DAFTAR GAMBAR

Gambar 1. 1 Skenario CCN .....	4
Gambar 1. 2 Skenario CDN.....	5
Gambar 1. 3 Skenario Proxy Server .....	5
Gambar 3. 1 Arsitektur Sistem Apache Traffic Server.....	12
Gambar 3. 2 Flowchart Arsitektur Sistem .....	13
Gambar 4. 1 Implementasi Edge Caching System .....	16
Gambar 4. 2 Konfigurasi "records.config" .....	20
Gambar 4. 3 Konfigurasi "ssl_multicert.config" .....	21
Gambar 4. 4 Konfigurasi "logging.yaml" .....	22
Gambar 4. 5 HTTP Stats Plugin .....	22
Gambar 4. 6 Status Apache Traffic Server .....	23
Gambar 4. 7 Source Code Website Multimedia index.html .....	24
Gambar 4. 8 Request SSL Website Multimedia.....	25
Gambar 4. 9 Virtual Machine Microsoft Azure.....	25
Gambar 4. 10 Request SSL Website VoD .....	26
Gambar 4. 11 Source Code Website VoD index.html.....	26
Gambar 4. 12 Source Code Website VoD index.js .....	27
Gambar 4. 13 Status Website Multimedia .....	27
Gambar 4. 14 Tampilan Website Multimedia .....	28
Gambar 4. 15 Status Web Server Apache2 .....	28
Gambar 4. 16 Output VoD Running .....	28
Gambar 4. 17 Akses VM pada Software Putty .....	29
Gambar 4. 18 Perintah IPTables .....	29
Gambar 4. 19 Tampilan Website VoD .....	30
Gambar 4. 20 Source Code Python3.....	31
Gambar 4. 21 Source Code index.html dan JavaScript .....	33
Gambar 4. 22 Perintah Running finpro.py.....	34
Gambar 4. 23 Finpro Dashboard .....	34
Gambar 4. 24 Pengaturan Network pada ATS .....	35
Gambar 4. 25 Pengaturan Network Client Pengujian Kondisi Cache .....	35
Gambar 4. 26 Pengaturan Network Client Pengujian Kondisi No-cache.....	36
Gambar 4. 27 Pengaturan IPTables .....	36

Gambar 4. 28 Tampilan HTTP Website Multimedia .....	37
Gambar 4. 29 Tampilan Squid.log.....	37
Gambar 4. 30 Tampilan Log Dashboard .....	38
Gambar 4. 31 Penambahan ATS pada Log Dashboard .....	39
Gambar 5. 1 Topology Skenario Jumlah User.....	43
Gambar 5. 2 Setting Cache pada Client.....	44
Gambar 5. 3 Output “sudo tail -f squid.log” .....	44
Gambar 5. 4 Setting No Cache pada Client.....	45
Gambar 5. 5 Edge Tier Topology .....	47
Gambar 5. 6 Mid Tier Topology.....	48
Gambar 5. 7 No-cache Topology.....	48
Gambar 5. 8 Tampilan Putty.....	50
Gambar 5. 9 Directory Video on Demand.....	50
Gambar 5. 10 Command Membagi per Segmen .....	50
Gambar 5. 11 Output Running Video on Demand .....	51
Gambar 5. 12 Tampilan VoD Resolusi 480p.....	51
Gambar 5. 13 Tampilan VoD Resolusi 720p.....	51
Gambar 5. 14 Tampilan VoD Resolusi 1080p.....	52
Gambar 5. 15 Grafik CPU Used Website VoD .....	58
Gambar 5. 16 Grafik Throughput HTTP Multimedia Skenario 50 User.....	59
Gambar 5. 17 Grafik Throughput HTTP Multimedia Skenario 100 User.....	59
Gambar 5. 18 Grafik Throughput HTTPS Multimedia Skenario 50 User .....	60
Gambar 5. 19 Grafik Throughput HTTPS Multimedia Skenario 100 User .....	60
Gambar 5. 20 Grafik Response Time HTTP Multimedia Skenario 50 User.....	61
Gambar 5. 21 Grafik Response Time HTTP Multimedia Skenario 100 User.....	62
Gambar 5. 22 Grafik Response Time HTTPS Multimedia Skenario 50 User.....	63
Gambar 5. 23 Grafik Response Time HTTPS Multimedia Skenario 100 User.....	63
Gambar 5. 24 Grafik Throughput HTTP Multimedia Lokasi Edge Ccaching .....	64
Gambar 5. 25 Grafik Throughput HTTPS Multimedia Lokasi Edge Caching.....	64
Gambar 5. 26 Grafik Response Time HTTP Multimedia Lokasi Edge Caching .....	65
Gambar 5. 27 Grafik Response Time HTTPS Multimedia Skenario Jumlah Node.....	66
Gambar 5. 28 Grafik Throughput HTTP VoD Skenario Resolusi Video.....	67
Gambar 5. 29 Grafik Throughput HTTPS VoD Skenario Resolusi Video .....	67
Gambar 5. 30 Grafik Response Time HTTP VoD Skenario Resolusi Video.....	68

Gambar 5. 31 Grafik Response Time HTTPS VoD Skenario Resolusi Video .....	68
Gambar 5. 32 Grafik Throughput HTTP VoD Lokasi Edge Caching.....	69
Gambar 5. 33 Grafik Throughput HTTPS VoD Skenario Lokasi Edge Caching .....	69
Gambar 5. 34 Grafik Response Time HTTP VoD Skenario Lokasi Edge Caching.....	70
Gambar 5. 35 Grafik Response Time HTTPS VoD Skenario Lokasi Edge Caching.....	70