

## DAFTAR GAMBAR

Gambar II-1 Perbedaan topologi.....	20
Gambar III-1 Model konsep.....	29
Gambar III-2 Sistematika penelitian .....	30
Gambar IV-1 Topologi .....	35
Gambar IV-2 Skenario pertama .....	37
Gambar IV-3 Skenario kedua.....	38
Gambar IV-4 <i>Interface</i> .....	39
Gambar IV-5 <i>Interface Cloud</i> .....	40
Gambar IV-6 <i>Interface Switch</i> .....	41
Gambar IV-7 <i>Cloud Zone</i> .....	41
Gambar IV-8 <i>External Zone</i> .....	42
Gambar IV-9 <i>Firewall</i> .....	42
Gambar IV-10 <i>Firewall 2</i> .....	43
Gambar IV-11 <i>Policy DoS</i> .....	44
Gambar IV-12 <i>Policy DoS dua</i> .....	44
Gambar V-1 Normal CPU dan <i>Network</i> .....	47
Gambar V-2 Normal RAM dan Disk .....	48
Gambar V-3 Spesifikasi FortiGate.....	48
Gambar V-4 informasi Penggunaan CPU .....	49
Gambar V-5 <i>Flow chart</i> skema penyerangan pertama.....	50
Gambar V-6 Kali <i>Attack ICMP</i> .....	51
Gambar V-7 Kali <i>Attack SYN</i> .....	51
Gambar V-8 FortiGate <i>Anomaly ICMP</i> .....	51
Gambar V-9 FortiGate <i>Anomaly SYN</i> .....	51
Gambar V-10 FortiGate Detail serangan .....	52
Gambar V-11 FortiGate CPU dan Memory ICMP .....	53
Gambar V-12 FortiGate CPU dan Memory SYN .....	53
Gambar V-13 Konektifitas PING.....	54
Gambar V-14 <i>Cloud ICMP firewall</i> CPU dan <i>Network</i> .....	54
Gambar V-15 <i>Cloud ICMP firewall</i> RAM dan disk .....	55
Gambar V-16 <i>Cloud SYN firewall</i> CPU dan <i>Network</i> .....	55

Gambar V-17 <i>Cloud SYN firewall RAM dan disk</i> .....	56
Gambar V-18 <i>Flow chart skema penyerangan Kedua</i> .....	57
Gambar V-19 <i>Cloud ICMP non firewall CPU dan Network</i> .....	57
Gambar V-20 <i>Cloud ICMP non firewall RAM dan disk</i> .....	58
Gambar V-21 <i>Cloud SYN non firewall RAM dan disk</i> .....	58
Gambar V-22 <i>Cloud SYN non firewall CPU dan Network</i> .....	59
Gambar V-23 <i>Konektifitas PING non firewall</i> .....	59
Gambar V-24 <i>Normal firewall</i> .....	61
Gambar V-25 <i>Normal non firewall</i> .....	61
Gambar V-26 <i>firewall ICMP</i> .....	62
Gambar V-27 <i>Non firewall ICMP</i> .....	63
Gambar V-28 <i>firewall SYN</i> .....	64
Gambar V-29 <i>Non firewall SYN</i> .....	65
Gambar V-30 <i>Normal firewall packet loss</i> .....	66
Gambar V-31 <i>Normal Non firewall packet loss</i> .....	66
Gambar V-32 <i>Firewall ICMP packet loss</i> .....	67
Gambar V-33 <i>Non firewall ICMP packet loss</i> .....	68
Gambar V-34 <i>firewall SYN packet loss</i> .....	68
Gambar V-35 <i>Non firewall SYN packet loss</i> .....	69
Gambar V-36 <i>Normal firewall jitter</i> .....	70
Gambar V-37 <i>Normal non firewall jitter</i> .....	71
Gambar V-38 <i>Firewall ICMP jitter</i> .....	71
Gambar V-39 <i>Non firewall ICMP jitter</i> .....	72
Gambar V-40 <i>firewall SYN jitter</i> .....	73
Gambar V-41 <i>Non Firewall SYN jitter</i> .....	73
Gambar V-42 <i>Analisa QoS throughput</i> .....	78
Gambar V-43 <i>Analisa QoS packet loss</i> .....	79
Gambar V-44 <i>Analisa QoS jitter</i> .....	79
Gambar V-45 <i>Resource utilization CPU cloud</i> .....	80
Gambar V-46 <i>Resource utilization memory cloud</i> .....	80
Gambar V-47 <i>FortiGate CPU resource utilization</i> .....	81
Gambar V-48 <i>FortiGate memory resource utilization</i> .....	81