Analisis kinerja pembatasan akses dan mitigasi resiko serangan melalui implementasi fungsi akses kontrol pada sistem firewall berbasis software defined networking = Performance analysis in access restrictions and attack mitigation through the implementation of access control function in firewall system based on software defined networking / M. Ariansyah Yutama

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Abstrak

ABSTRAK
Abstrak - Software Defined Networking (SDN) merupakan teknologi baru yang hadir untuk melengkapi kekurangan jaringan konvensional yang sekarang digunakan, teknologi SDN masih memiliki beberapa kekurangan yang perlu diperhatikan khususnya dari sisi keamanan, misalnya serangan IP Spoofing dan Man of The Middle of Attack. Penelitian ini membahas mengenai Analisis Kinerja Pembatasan Akses dan Mitigasi Resiko Serangan Melalui Implementasi Fungsi Akses Kontrol Pada Sistem Firewall Berbasis SDN, berdasarkan hasil penelitian telah dibandingkan performa SDN seperti throughput, latency, dan jitter ketika infrastruktur SDN tidak menggunakan firewall, ketika menggunakan firewall tanpa serangan, ketika tanpa firewall dengan serangan dan ketika menggunakan firewall dengan serangan. Dari penelitian diperoleh penurunan nilai throughput TCP firewall tanpa serangan ke firewall dengan serangan adalah 5.96 Gb/s ke 3.19 Gb/s dan throughput UDP adalah 131.2 Mb/s ke 7 Mb/s. Sedangkan nilai latency dan jitter firewall dengan serangan akan memiliki nilai paling tinggi dibandingkan yang lainya. Pada penelitian ini telah dilakukan simulasi pembatasan akses kontrol antar sesama tenant dan berbeda tenant serta mitigasi terhadap serangan seperti MAC Flooding, ICMP Floding dan Ping of Death
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ABSTRACT
Abstract - Software Defined Networking (SDN) is a new technology that comes to complement the shortcomings of conventional networks are now used, SDN technology still has some shortcomings that need to be considered, especially in terms of security, such as IP Spoofing attacks and Man of The Middle of Attack. This study discusses about Performance Analysis in Access Restrictions and Attack Mitigation Through the implementation of Access Control Function in Firewall System Based On SDN, based on the results of studies have compared the performance of SDN as throughput, latency, and jitter when infrastructure SDN is not using a firewall, when using a firewall without the attack, when no firewall with attack and when using a firewall with attack. From the study showed impairment TCP throughput, firewall without attack to the firewall with an attack is 5.96 Gb/s to 3.19 Gb/s and UDP throughput is 131.2 Mb/s to 7 Mb/s. While the value of latency and jitter of firewall with attack will have the highest value compared to the other. This study has been conducted simulation access-control restrictions between the members of different tenants and identic tenants and mitigation against such MAC Flooding attack, ICMP Floding and Ping of Death