

# Analisis pada rancangan jaringan protocol BGP menggunakan metode BGP confederation dan bgp reflector = Analyze protocol BGP simulation using BGP confederation method and BGP reflector method

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## Abstrak

Pada Skripsi kali ini akan dibahas perbandingan 2 metode antara BGP Reflector dan BGP Confederation dengan menggunakan protocol BGP sebagai protocol utama. Kedua metode ini diharapkan bisa memberikan kinerja protocol yang lebih baik dan lebih handal dalam menangani traffic yang banyak. Perbandingan dilakukan dengan melakukan perbandingan terhadap QoS (Quality of Services) dimana simulasi akan dilakukan dengan bantuan software GNS 3 dan wireshark untuk penghitungan QoS. Simulasi dilakukan dengan melakukan migrasi pada topologi full mesh BGP menjadi BGP Reflector dan BGP Confederation. Jenis dari QoS yang digunakan adalah Packet Loss, Delay, Jitter, dan Throughput. Adapun hasil dari perbandingan keduanya untuk paket size yaitu size 1000 bytes, 5000 bytes, 10000 bytes dan 15000 bytes. Salah satu hasil size dengan size 15000 bytes pada reflector adalah delay 0.306 seconds, jitter 0.229, throughput 718.674 bytes/seconds, dan packet loss sebanyak 11%. Sedangkan untuk confederation yaitu delay 0.487 seconds, jitter 0.4203 seconds, throughput 438.97 bytes/seconds, dan packet loss sebanyak 8%. .....

In this thesis will discuss the comparison of two methods of BGP Reflector and BGP Confederation using BGP protocol as the primary protocol. Both methods are expected to provide a better protocol performance and more reliable in handling traffic. The comparison is done by checking the Quality of Services. This comparison originated from a full mesh topology which migrated to Reflector and Confederation. Types of Quality of Service is Packet Loss, Delay, Jitter, and Throughput. Comparisons were made to do a comparison of the QoS (Quality of Services) which the simulation will using software called GNS 3 and software wireshark for calculating QoS. Simulation are migrated from BGP full mesh topology to BGP Reflector and BGP Confederation. Types of QoS that is used is Packet Loss, Delay, Jitter, and Throughput. The results of the comparison base from the size while sending the message, 1000 bytes, 5000 bytes, 10000 bytes and 15000 bytes. One of the results with the size of 15000 bytes gives the reflector's delay is 0.306 seconds, jitter is 0.229 seconds, throughput is 718.674 bytes/seconds, and packet loss is 11%. Otherwhile, confederation's delay is 0.487 seconds, jitter is 0.4203 seconds, throughput is 438.97 bytes/seconds, and packet loss is 8%.