

Data communications at network internet have reached very fast progress, marked by its usage more immeasurable and the used of technology have very far differ. Up to now have so much variation of data overspread through internet. In the past internet only pass of ordinary data packets, nowadays as according to the traffic requirement, internet have more of packets multimedia such as voice and video. Multimedia application nowadays not only host to host communication, but also broadcast and multicast. This will cause the increasing of data traffic which can cause degradation of network performance especially at network that owning bandwidth limited

In this time network internet exist in using QoS best Effort, to treat all data packet to be served in equal to as well as possible. Though be required better QoS to serve different packets such as audio and video. Of course to support required the services mechanism of good management bandwidth, in order to each;every service to be given to own resource which enough in order to Got QoS far better.

To overcome this problem which can be done by applying IP Multicast Combined with RSVP (Resource Reservation Protocol) at network internet. IP Multicast needed to to deliver a packet to an amount of certain node concurrently, so that for need of application multimedia requiring delivery to an amount of just certain node earn fullfilled. While RSVP guarantee available of resource in certain quantity required in delivery of a packet, so that be expected a compared to better service quality network of best effort. Result of implementation of IP Multicast with RSVP give improvement value of throughput, delay, jitter, and packet loss each 107,6 Kbps, 0,591ms, 1,0133ms and 10,9% at bit rate 1,5 Mbps. While at bit rate 2 Mbps improvement value of throughput, delay, jitter, and packet loss each 233 Kbps, 0,6828ms, 0,6139ms dan 9,4%.

Keyword: RSVP (Resource Reservation Protocol), IP Multicast, Qos (Quality Of Service

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