

Research Paper Proposal

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Title: Utilizing Resource Reserve Protocol to Achieve QoS Control

Introduction:

Contemporary world is a world with explosive data and the network has already become an indispensable part of human's daily life. However, as the quantity of netizen increasing exponentially, the traditional "Best of Effort" transfer service provided by network cannot accommodate to user's divers demand any more. As a result, the unstable network service will increase the cost and difficulty in network maintenance. Therefore, the methodology of providing QoS(Quality of Service) has owned extremely significance among network providers as well as internet users.

The traditional internet service is sufficient for satisfying users' basic demands such as emails checking, google searching and online chatting. However, as increasing quantity of audio/video involved services taking placing nowadays, especially in the area of military, the strict requirements regarding to packet loss rate, latency and bandwidth required a new protocol to take over. As a result, the Resource Reserve Protocol (RSVP) which is based on TCP/IP was put into use to insure a stable environment in end to end network transfer process. RSVP is indeed a network control protocol that works along with routing protocol, belonging to Transport Layer of Open System Interconnect (OSI) 7 layers model[1]. By utilizing RSVP to reserve a portion of bandwidth, the QoS of media transfer process can be easily achieved.

Goals and Expected Conclusion:

In order to achieve QoS among multiple media streams transfer process, server will be asked to leave resource for each streams in advance. However, as the number of streams increasing, system may run out of resource and result in failure of accepting new income streams. To optimize the system resource distribution methodology among multiple media streams transfer process, a dynamic adjustment algorithm utilizing RSVP will be implemented to achieve better QoS level. Therefore, utilization of network resources will be optimized without affecting the current QoS level.

Working Outline:

- *Abstract
- *Introduction of RSVP
- *RSVP working process
- *Principle of achieving QoS
- *Dynamic adjustment algorithm
- *Conclusion
- *Appendix
- *Reference

Reference:

[1]Garrett, Aviva; Drenan, Gary; Morris, Cris (2002). *Juniper Networks Field Guide and Reference*. p. 583.