

A Scalable Approach for IP-Multicast in Differentiated Services Networks

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ABSTRACT

The phenomenal growths of group communications and QoS-aware applications over the Internet have respectively accelerated the development of two key technologies, namely, multicasting and Differentiated Services (DiffServ). The integration of multicasting support in the DiffServ domain is useful in several aspects, however, the conflicts between traditional multicast and DiffServ make the integration of the two technologies a nontrivial task. This paper demonstrates some of the problems which will arise when IP Multicast is used in DiffServ networks without taking special precautions into account for providing it. Those problems mainly lead to situations in which other service users are affected adversely. In this paper, we propose a simple and scalable approach to retain the benefits of the DiffServ architecture in multicast, and give some simulation results. Finally, we present the future work to ameliorate this approach.

Keywords: QoS-aware, IP-multicast, DiffServ, simulate