عنوان مقاله:
An Optimal Traffic Distribution Method Supporting End-to-End Delay Bound

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خلاصه مقاله:
Routing methods for optimal distribution of traffic in data networks that can also provide quality of service (QoS) for users is one of the challenges in recent years' research on next generation networks. The major QoS requirement in most cases is an upper bound on end-to-end path delay. In multipath virtual circuit switched networks each session distributes its traffic among a set of available paths. If all possible paths are considered available, then the source's decision on its traffic distribution can be considered as routing. A model of the routing function as a mathematical problem which distributes the input traffic over possible paths for each session is proposed here. A distributed and iterative algorithm which will keep the average end-to-end delay for individual paths below a required bound is introduced. This algorithm minimizes the total average delay of all packets in the network. The convergence of the algorithm is illustrated.

کلمات کلیدی:
Traffic Distribution, Routing, Convex Optimization, Subgradient Method