

Modeling for Pricing of Loss-rate Guaranteed Internet Service Contracts

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Abstract

The technological advancements in recent years are allowing Internet Service Providers (ISPs) to provide quality of service (QoS) assurances for data flow through their domains. Depending on the application, QoS may be necessary not only as a bandwidth assurance, but also on the loss, delay, etc., experienced by the data. In the Internet technologies, such guarantees may only be provided in probabilistic terms. In this article, we develop a stochastic modeling framework for the pricing of probabilistic loss-rate guaranteed Internet service contracts.

Keywords: Internet Quality of Service, QoS assurance, spot-pricing, nonlinear pricing, simulation modeling.