Abstract

The Internet society is continuously growing and the need of performance studies in this field is essential in order to obtain better throughput for the Web users. Moreover, Internet applications and clients have varied service expectations and demand provisioning of different levels of QoS to multiple traffic classes on the Internet. Meeting client QoS expectations prove to be a difficult task for E-Commerce service providers, especially when web servers experience overload conditions that cause increased response time, request rejections, user frustration, lowered usage of the service and reduced revenues. A recently proposed MLF (Multi Layered Filtering) framework manages potential workload; it also guaranties data freshness for all transactions that complete within their deadlines without service differentiation using request filtering and admission control schemes. In this paper, an improved request classifier and class-based admission control scheme called Multi-phase Admission Control (MPAC) that can be integrated with the MLF framework to prioritize user requests into several service classes according to their importance, and offer differentiated quality of service in terms of minimizing the frustration of premium users is presented and evaluated. The performance evaluations carried out confirm that the scheme can significantly boost the reward for having serviced a request while providing better QoS to clients.
Admission Control and Request Scheduling for Secured-concurrent-available Architecture

References


Index Terms

Computer Science Communications

Keywords
Multi layered filtering Multi phase admission control Differentiated Service QoS Request Classification