The Development and Evaluation of a Monitoring Technique for M-FAC

Abstract

This paper presents the development of a measurement based flow admission control (M-FAC) mechanism, which is used in conjunction with Class Based Queuing (CBQ) to support guaranteed services in multiservice packet switched networks. M-FAC uses an analytical queuing model to decide if a new flow may be admitted into a particular class, and bases this decision on the parameters provided by the flow's source. However, once the new flow has been accepted, M-FAC continually monitors the arrival process in order to determine the true load on the class' queue. This true load is then used in subsequent admission tests. The analytical model was developed in previous work, and this paper focuses on the development of the monitoring process.
This paper introduces the monitoring process and explains how it is used by M-FAC to continually update the estimate of the instantaneous load vector, and presents the results from a simulation experiment designed to evaluate the effectiveness of this monitoring process.