DEAN: A SAPIENT TECHNIQUE FOR DYNAMIC ESTIMATION OF AVAILABLE BANDWIDTH IN A NETWORK PATH.

G. C. BHANU PRAKASH, DEVINDER KUMAR, ANIESH A, KANISHK CHATURVEDI, RAHUL PANICKER AND K. V. RAMAKRISHNAN

Abstract

Estimation of available bandwidth in a network plays a vital role in providing good quality of service. This paper presents a new technique for available bandwidth estimation named as **DEAN**-Dynamic Estimation of Available bandwidth in a Network path. Based on the concept of self-induced congestion, DEAN estimates the available bandwidth by sending many heaps of packets (1200). For the purpose of analysis, each heap is divided into 12 blocks of 100 packets and every block is divided into 10 chunks (Intervals). The computation is based on the delay suffered by individual packets while traveling across a network path. The synchronization between the sender and the receiver is not required as the relative queuing delay with respect to each packet is considered in this technique. All statistical analysis and calculations are performed at the receiver. Receiver sends a control packet to the sender furnishing the next transmission rate. The experiment performed in a simulated environment gave good estimates of available bandwidth.

Keywords: Network path, Round Trip Time, Mean delay, Relative Queuing Delay, Available Bandwidth, PXDLY.