Congestion Control for Background Data Transfers With Minimal Delay Impact

ABSTRACT

A KEY element of the success of the internet architecture is the ability to accommodate current and future needs of very diverse applications. Connection rates differ by many orders of magnitude, while file transfer sizes vary by more than ten orders of magnitude. Nevertheless this is achieved using only a handful of transport protocols, mainly Transmission Control Protocol (TCP) and its variants, which in essence allocate network bandwidth to flows continuously so as to achieve fair sharing at all times. Indeed TCP 'fairness' or 'friendliness' has become a common prescription for congestion control algorithms which intends to ensure equal sharing between flows.

EXISTING SYSTEM

In Existing System, Congestion control protocols for background data are commonly conceived and designed to emulate low priority traffic, which yields to transmission control protocol (TCP) flows. In the presence of even a few very long TCP flows, this behavior can cause bandwidth starvation, and hence, the accumulation of large numbers of background data flows for prolonged periods of time, which may ultimately have an adverse effect on the download delays of delay-sensitive TCP flows.

DIS ADVANTAGES

- When all internet flows use the same protocol as applications do not equally value download delay.
- It creates unnecessary delays to short and delay-sensitive flows.

PROPOSED SYSTEM

In Proposed System, we look at the fundamental problem of designing congestion control protocols for background traffic with the minimum impact on short TCP flows *while achieving a certain desired average throughput over time*. The corresponding optimal policy under various assumptions on the available information is obtained analytically. We give tight bounds of the

distance between TCP-based background transfer protocols and the optimal policy, and identify the range of system parameters for which more sophisticated congestion control makes a noticeable difference. Based on these results, we propose an access control algorithm for systems where control on aggregates of background flows can be exercised, as in file servers. Simulations of simple network topologies suggest that this type of access control performs better than protocols emulating low priority over a wide range of parameters.

ADVANTAGES

- It is accurate when the sizes of the short flows are sufficiently larger than the bandwidth delay product.
- The delay reduction due to LEDBAT relative.

SYSTEM REQUIREMENTS

H/W System Configuration:-

Processor	-	Pentium –III
RAM	-	256 MB (min)
Hard Disk	-	20 GB
Key Board	-	Standard Windows Keyboard
Mouse	-	Two or Three Button Mouse
Monitor	-	SVGA

S/W System Configuration:-

Operating System	:	Windows95/98/2000/XP
Application Server	:	Tomcat5.0/6.X
Front End	:	HTML, Jsp
Scripts	:	JavaScript.

Server side Script	:	Java Server Pages.
Database	:	MySQL 5.0
Database Connectivity	:	JDBC