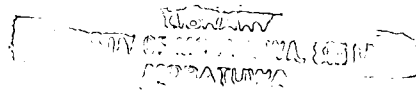# A Tool to Measure HTTP Performance

THESIS PRESENTED
BY
R. P. DASANAYAKA

SUPERVISED BY

DR. GIHAN DIAS

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DECLARATION

The work submitted in this thesis is the result of my own investigations, except where it is otherwise stated.

It has not already been accepted in substance for any degree, and also is not being concurrently submitted for any other degree.

...mp...Dahmayaka...

R. P. Dasanayaka,
(Candidate)

Dr. Gihan Dias
(Supervisor)

Dedicated to

my parents

and

teachers

who encouraged me

in my education

Abstract

The World Wide Web is one of the most popular services on the Internet today. Users of the Internet demand better performance for their web access. In order to meet this requirement, network administrators and engineers try their best to harness the maximum performance from the available resources. High performance for web services can be achieved by using cache-proxies, traffic shifting, mirroring or increasing the available bandwidth.

We have identified a need to compare the effect of performance before and after changing different network parameters.

The objective of this project is to develop a tool that measures and compares HTTP performance under different conditions. This tool also enables the network administrator to conduct the measurements without user involvement.

TCPDUMP was used to capture IP packets transmitted over the broadcast LAN. This capturing process was transparent to users. The captured data was used to identify different web requests, relevant responses and other related statistics. Using these statistics, the tool can regenerate the same web requests, at a later time, under different network conditions and can measure the performance parameters of the network. The tool finally presents a comparison of the performance, so that an administrator can get a quantitative figure of the impact of the changes that he has done.

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Table of Contents

Table of Figures