On the Benefits of Cooperative Proxy Caching for Peer-to-Peer Traffic

Aim:

The main aim of this project is to analyze the potential of cooperative proxy caching for peer-to-peer (P2P) traffic as a means to ease the burden imposed by P2P traffic on Internet Service Providers (ISPs).

Existing System:

The peer-to-peer networks usage for data transmission has increased which has increased the burden on the Internet Service Providers (ISPs). This could not be reduced by the existing algorithms and models.

Proposed System:

In the proposed system, we propose two models for cooperative caching of P2P traffic. The first model enables cooperation among caches that belong to different autonomous systems (ASs), while the second considers cooperation among caches deployed within the same AS. We analyze the potential gain of cooperative caching in these two models. To perform this analysis, we conduct an eight-month measurement study on a popular P2P system to collect traffic traces for multiple caches. Then, we perform extensive trace-based simulations to analyze different angles of cooperative caching schemes. By these models, significant improvement in byte hit rate can be achieved using cooperative caching, simple object replacement policies are sufficient to achieve that gain, and the overhead imposed by cooperative caching is negligible.

Modules:

1) **Cache Module**: This module is design to hold all file details and their content which are requested by one peer and successfully transfered by other peer. If request came for previous file then Cache will fullfill the response. Cache contains all connected peers and their ipaddresses and port number.If any peer diconnected then that peer ip address will be removed.

2) **Peers** : This is main module which is available in all peer systems.This module is design to connect to cache peer and connect to all other peers which are up. This peer module exchanged files with each other through cache peer.One peer can request to other peer through cache server for files

3) **PeerThread** : This module is supporting multi connection with Cache and other Peers and it will enable Cache and peers to send/receive multiple file request and connection request.

4) **ShareThread** : This module is supporting multi connection for Peers.

5) **Refresh option**: This option will help peers to look for old connection which are currently up.

6) **File Transfer**: This option help peers to transfer files .

Software Requirements

Microsoft Windows XP Professional

JDK 6.0

Java Swing

Database: Mysql

Hardware Requirements

Pentium 4 processor

1 GB RAM

80 GB Hard Disk Space