Video Delivery Performance Enhancer for VoD System

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Abstract- Normally, internet videos are affected by late delivery performance. It will take more time to play continues videos. Because every server has a client limitation, within the limitation server will response to all clients evenly without any latency. Server also response to the other clients out of the limitation but, video delivery performance will affect for entire clients under the server. Proposed system helps to provide required content to all the clients at same time with the help of C2C systems. In the sense both systems act as client and server. Here by we are using two Algorithms. One is WTD Algorithm and another one is Universal Prediction Algorithm. The experiments results show increase in video delivery performance and reduce the server workload.
Keywords – VoD, Video performance, Client act as server, Live Stream.

I. INTRODUCTION

The increasing use of Internet for content distribution, caching and replication techniques are receiving more and more attention. These are effective approaches to alleviate congestion on the Internet and to make the Internet more responsive. A scheme for fast service location in peer-to-peer systems is proposed. Nowadays, new forms of Internet content and services, such as video-on-demand, which requires intensive bandwidth and predictable data transmission delay, are emerging. Meanwhile, the number of content providers turning to CDNs to better service their customers is growing rapidly. In existing world faces issues in video delivery performance, such as support for streaming content or real-time events, scalability, built-in security mechanism, and so forth. In this paper, we study algorithms that provide the users with a high-quality VoD service while ensuring a high utilization of the system resources (caching). We evaluate our algorithms using both extensive simulations and real experiments under different user arrival/departure time.

Video distribution over the Internet has been a prolific area of research. The particular problem of designing a VoD service has also received extensive attention in the past. An important requirement of a VoD service is *scalability*, i.e., to be able to support a large number of users, as a typical video stream imposes a heavy burden both on the network and the system resources(e.g. disk I/O) of the server. The multicasting paradigm has been proposed to address the scalability issue. However, these systems require a multicast-enabled infrastructure, which unfortunately has never materialized.

We assume a large number of users (referred to also as clients, nodes, or peers) interested in some video content, which initially exists on a special peer that we call the *server*. Users arrive at random points in time, and want to watch the video sequentially from the beginning (fast-forward functionality is not discussed for limitations of space). There sources (especially network bandwidth) of the server are limited, and hence, users should contribute their own resources to the system.

II. SYSTEM ARCHITECHTURE

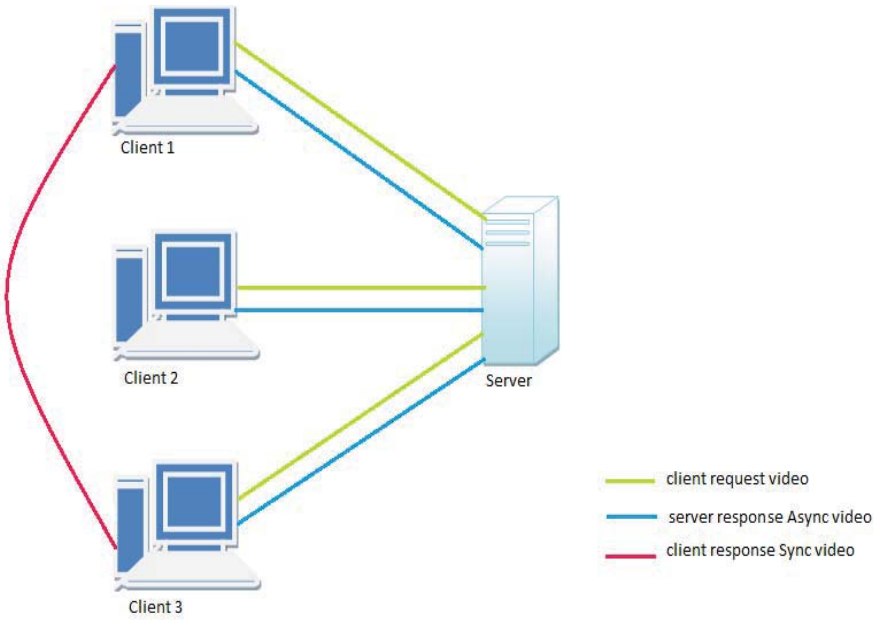

Fig1. System Architecture of proposed System

Fig1. Shows overview of the experiment, Server is responding the clients based on the Synchronous/Asynchronous video requests. i.e, Initially client 1 requesting video, for that server response to client 1. Further client 2 and client 3 are requesting video simultaneously, since client 2 requesting for different video (Asynchronous), server itself response to client 2. But, in the case of client 3 it's a synchronous video request which is watching by client 1 so, server is forwarding request to client 1, then from the client 1 cache client 3 get the Synchronous video. To predict synchronous and asynchronous request, we use Universal prediction algorithm. To get the video from the client 1 cache, we proposed WTD algorithm.

III. FLOWCHART

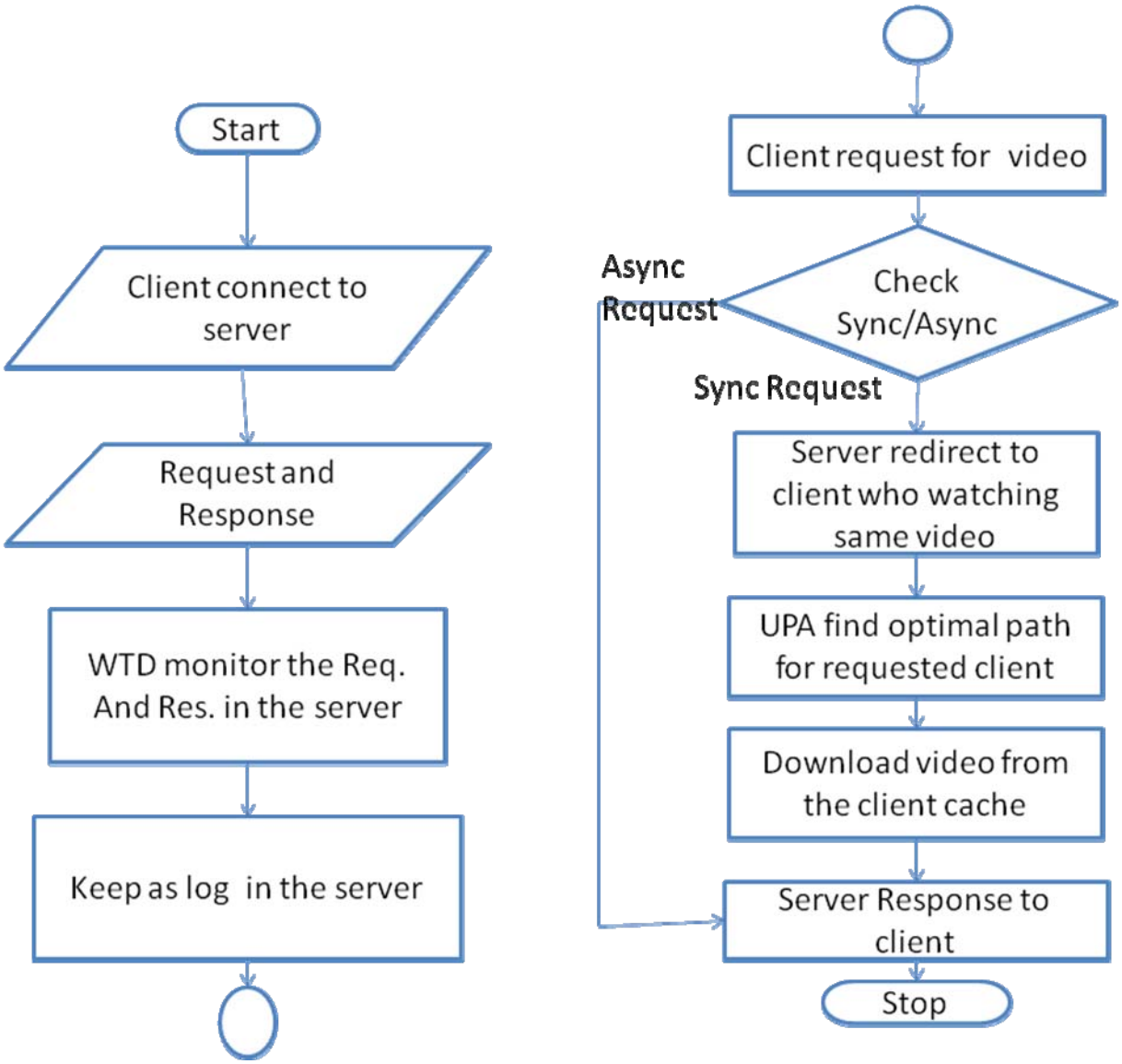

Fig2. Flowchart of Proposed System

Flow chart gives deeply working about system as follows,

Server is responding the clients based on the Synchronous/Asynchronous video requests. Client send request to Server, Server will response to client depends on the request type, These information stored as log in server using WTD, Another client send the request to server at the time of sever busy, then server will check whether new request is synchronous or asynchronous using log, if it is synchronous video request server will forward the request to existing client who already watching the video UPA finds the optimal path to download video from the existing client cache. In the case of asynchronous request server will response to another client.

IV.CALIBRATION

The major drawback of the CDN model is it's in ability to take advantage of the upload bandwidth of the clients, which effectively puts all the loads onto the CDN infrastructure (the involved servers and networks). In fact, the bandwidth provisioning within a CDN has to grow proportionally with the number of clients, making CDNs an expensive solution for large client populations. So, we enhance video delivery performance to reduce the CDN sever workload required for streaming live events to a large audience in a multicast VoD system.

V.CONCLUSION

Video delivery performance enhancer is implemented in VoD system by delivering content to end users in the network. Content distribution reduces the workload of the server by serving some or all of the contents of video from the existing client. Consequently, caching techniques are gaining more attention in order to meet up the new technical and infrastructure requirements of the next generation VoDs. From our implementation we achieved cache pre fetching strategy, that's provided server response in short latencies and server is able to serve many more concurrent clients than the original capacity of the server by the techniques WTD and Universal prediction, we introduced client act as a server.

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