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A Review on Content Delivery Network for Efficient Cloud Storage

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ABSTRACT

By this, I want to suggest that the content control is a big technique in the network model of the Internet, which is called a Content distribution network. The CDN's architecture and implementation should ensure that they are delivering optimum quality of services (QoS). A paper I've written aims to brief the taxonomy of the CDN and will include a general summary. Many of the more recent advancements in hungry apps for smartphones and smart devices call for more effective and secure content distribution methods, regardless of the bottleneck constraints that result in a cloud overhaul of the entire CDN architecture as the CCDN or a new CCDN business model. Through talking about the problems for CCDNs along with the evolved architecture, the paper explores how to build one's own CCDN.

Keywords : Content Delivery Network, Cloud Storage, Recommendation system, Load Balancing

I. INTRODUCTION

A web portal, is a means of transmitting data across the Internet, meaning that Internet users who have not access to the main site will also have access. The main point of this to copying such records on various computers, and then making these servers available all over the world. This is analogous to the concept of long-term preservation of documents arranged next to the actual location of the visitors. Often in the event that a visitor from Russia gets to a site hosted in the United States, there is a delay or lag brought about as a result of the gap transmitted across between the network. In the case that the file was being accessed by guest, a CDN could first check if the accessed file was actually on the intended server farthest from the guest. If the file was determined to be residing on the targeted server, the file would be switched from the server nearest the guest and dramatically minimise the movement time. If it was not stored in the main server and sent to a data centre, it will be sent from the main server to a data centre, in a perfect country in the world, in Russia. The time span until another visitor from Russia gets to the site, brings upon

locating the document on a server farm or one of the places closest to them. The time to locate the document will then be significantly reduced.

The CDN will still remain in touch with the protection server to deliver any content it has not already passed to the device. As a result, it is fully open to the customer to switch between service providers. The only way a user can know that their CDN has been accessed is if the delivered URL has a different address from the one that the service provider has been provided.

Content distribution networks are used as a method to distribute content through multi-way interaction with B2B platforms. In comparison, these days many facets of our everyday lives, such as shopping online, sending e-mails, playing online games, and viewing movies and sports moved online and the networks that are used for this purpose are known as network content distribution. Those businesses that deploy a content distribution network to publish their Web content should expect.

In this paper we study about the related work done in section II, in section III the implementation details where we see the system architecture, modules description, mathematical models, algorithms and experimental setup. We discuss about the expected results in section IV and at last in section V we provide a conclusion.

II. RELATED WORK

M. Cha et.al. [2] did an in depth study of YouTube and other similar UGC systems on the basis of large data collection. The data analysis based on popularity distribution, popularity evolution, and content duplication of user generated video contents was explored. The behavior of user and recognized the solution that shape the popularity distribution was studied. The opportunities to influence the latent demand for niche videos that are not reached today due to information filtering effects or other system scarcity distortions were provided.

F. Chen et.al [3] investigated the issue of incorporation of Web server replicas in storage cloud-based CDNs together with building distribution paths among them to reduce the cost incurred on the CDN providers although satisfying QoS requirements for user requests. The problem was constructed as an Integer Program and a variety of offline and online greedy heuristics were offered and also performance in opposition to the optimal by means of Web trace-based simulations was estimated. In real world, latency can vary because of obstruction, network failures, route changes etc., which is not explicitly addressed in this paper.

A. Datta et.al [4] proposed an approach for granular, proxy-based caching of dynamic content which merge the benefits of both proxy-based and back end caching. This approach is able reduce the bandwidth and response times in real-world dynamic Web applications. Page level caching solutions must rely on the request URL to identify pages in cache. Proposed dynamic proxy caching technique allows granular, proxy based caching where both the content and layout can be dynamic.

H. Liu et.al [5] studied content multi homing, by initiating the CMO algorithm and the client adaptation algorithm. These two algorithms are proposed to reduce both the cost and the performance for content multi homing. Algorithm was designed to calculate assignments of content objects to content distribution networks for content publishers. They also demonstrated a novel, lightweight client adaptation algorithm executing at individual content viewers to achieve scalable, fine-grained, fast online adaptation to optimize the quality of experience (QoE)

for individual viewers. Content multi homing algorithms decreases publishing cost by up to 40%.

I Poese et.al [6] proposed a novel system which permits ISPs (Internet Service Providers) to determine and utilize path diversity called Provider-aided Distance Information System (PaDIS). Proposed approach utilizes information only accessible to the ISP to rank any client-host pair on the basis of distance information, such as delay, bandwidth or number of hops. Content providers and distributors may also utilize PaDIS to enhance content replication and delivery strategy due to increased access to meta-information.

S. Scellato et.al [7] described how to extract geographic information from social cascades to improve caching of multimedia files in a Content Delivery Network (CDN). Cache replacement policies use information to guarantee that content relevant to a social cascade is kept close to the users who may be interested in it. Performance evaluation shows that they are able to improve cache hits with respect to cache policies without geographic and social information.

G. Szabo et.al [8] introduced a method and verification on how the popularity of content can be guessed very soon by measuring the popularity at an early time. On basis of linear correlation author introduced three models to make predictions about future popularity.

Z. Wang et.al [9] conducted a large-scale measurement of a real-world online social network system to study the propagation of the social video contents. They summarized important characteristics from the video propagation patterns, including social locality, geographical locality and temporal locality. A propagation-based social-aware replication framework using a hybrid edge-cloud and peer-assisted architecture, namely PSAR, to serve the social video contents was proposed. Their replication strategies in PSAR are based on the design of three propagation-based replication indices, including a geographic influence index and a content propagation index to guide how the edge-cloud servers backup the videos, and a social influence index to guide how peers cache the videos for their friends. By incorporating these replication indices into their system design, PSAR has significantly improved the replication performance and the video service quality. Trace-driven experiments further demonstrate the effectiveness and superiority of PSAR, which improves the local download ratio in the edge-cloud replication by 30%, and the local cache hit ratio in the peer-assisted replication by 40%, against traditional approaches.

S. Srinivasan et.al [10] presented a novel CDN architecture that allows a content publisher to dynamically scale their content delivery services using network virtualization and cloud computing techniques. Active CDN enables a next-generation content delivery mechanism using CDNs, and also allows for “pop-up content store” nodes that appear on an as-needed basis on the Internet without having to be pre-deployed. Such a CDN architecture would also be able to serve content more efficiently in disconnected, opportunistic networks.

J. Broberg et.al [11] introduced Meta CDN, a system that exploits ‘Storage Cloud’ resources, creating an integrated overlay network that provides a low cost, high performance CDN for content creators. Meta CDN removes the complexity of dealing with multiple storage providers, by intelligently matching and placing users’ content onto one or many storage providers based on their quality of service, coverage and budget preferences. Meta CDN makes it trivial for content creators and consumers to harness the performance and coverage of numerous ‘Storage

Clouds' by providing a single unified name space that makes it easy to integrate into origin websites, and is transparent for end-users.

III. PROPOSED SYSTEM

A. System Overview

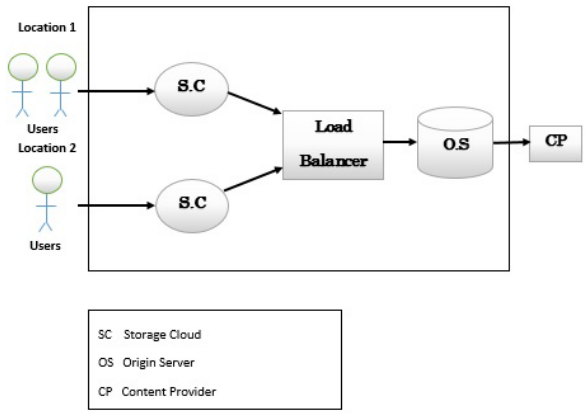

Fig.1: System Architecture

Figure 1 shows the architecture of proposed system. In figure 1 we can see the users, at one end having different locations. The users are served by the storage cloud nodes based on their location. The cloud servers fetch their data from the origin server based on the user queries and searching patterns. There is content provider on the other end that updates the server continuously by adding new content.

In a conventional drug channel, in an incredibly inactive manner, material is not utilised, i.e., no valuable details was utilised by the channel when fulfilling a substance requirement. Due to the contentious nature of the contents, this cannot be suitable for any site that is meant to never be fit for controversial content. In today's content conveyance environment, community trends occur between those messages which are sent by individuals or communities, and their prominence in the user community. For an overview of 500 customers, we add a co-clustering algorithm to the matrix, as a data form in the attributed framework.

Knowledge that these clients shared. The approach that the content analyst would consider is that there is a very wide number of content category clusters, where others, within of the same, content community, appear to ask for the content contents inside of the body of the group of the content group. This perception tends to suggest that groups of people with common interests should be grouped together.

IV. CONCLUSION

The late rise of storage cloud providers has tempt content makers with content storage and delivery abilities that were beforehand just realistic by extensive CDN owners. In addition, the storage cloud providers are only fundamental storage services, and don't offer the abilities of a completely featured CDN CDN, like, intelligent replica placement, automatic replication, failover, load redirection and load balancing. Cloud based content delivery network is a basic, broadly useful, reusable service which permits content makers to influence the services of numerous Storage cloud suppliers as a unified CDN. The execution of the proposed framework is sufficiently convincing to use as a platform for elite, minimal effort content delivery for content producers and consumers

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