ISSN 2395-1621

Prediction Based Outcome For Media Streaming Application In the cloud

[#1]Ankita Gorde, [#2]Neha Gandhi, [#3]Richa Mishra, [#4]Rupesh Pathak, [#5]Prof. B.Padmavathi

[1]ankgorde@gmail.com
[2]nehagandhi2593@gmail.com
[3]richamishra610@gmail.com
[4]rickypathak30@gmail.com
[5]b.padmavathi@raisoni.net

[#12345]Department of Computer Engineering, GHRCEM, Pune

ABSTRACT

Media Streaming applications have attracted large amount of users in the internet. Due to onset of these bandwidth-intensive applications, it became economically inefficient to provide distribution of streaming with guaranteed QoS dependent only on central resources at a Media content provider. Cloud computing offers an elastic infrastructure so that media content providers (e.g., (VoD) i.e Video on Demand providers) can use to obtain streaming resources that matches the demand or requirement. Media content providers are debited for the resources allocated or reserved in the cloud. Most of the existing cloud providers use to employ a pricing model for the reserved. Such pricing schemes offers an discount rates depending non-linearly on the period of time the resources are reserved during this time in the cloud. In this case, to decide that the right amount of resources reserved in the cloud and their reservation time is an open problem such that the cost on the media content provider is minimized.

Keywords– Media Database, Media Information Retrieval, Genetic Algorithm, Query ranking.

ARTICLE INFO

Article History

Received :16th April 2016

Received in revised form :

19th April 2016

Accepted : 21st April 2016

Published online :

26th April 2016

I. INTRODUCTION

Now days Streaming media is compressed video or audio content over the world wide and played immediately. This streaming media the use does not have to wait for download the any video file or audio file to play this file, because the media is sent in a continuous stream of data it can play. Video file does not exchanged peer to peer file sharing.Everyone can easily access the data from cloud anywhere. Also we can upload and download the videos on cloud to access. . In this case, an open problem is to decide on both the right amount of resources reserved in the cloud, and their reservation time such that the financial cost on the media content provider is minimized.Video content constitutes a dominant fraction of Internet traffic today. Further, several analysts forecast that this contribution is set to increase in the next few years. This trend is fuelled by the ever decreasing cost of content delivery and the emergence of new subscription- and ad-based business models. In the spirit of Herbert Simon's articulation of attention economics, the overabundance of video content increases the onus on content providers to maximize their ability to attract users' attentions.Based on the prediction of demand for streaming capacity, our algorithm is carefully designed to reduce the risk of making wrong resource allocation decisions. The results of our numerical evaluations and simulations show that the proposed algorithm significantly reduces the monetary cost of resource allocations in the cloud as compared to other conventional schemes.Media streaming applications have recently attracted a large number of users in the Internet. With the advent of these bandwidth intensive applications, it is economically inefficient to provide streaming distribution with guaranteed QoS relying only on central resources at a media content provider. Cloud computing offers an elastic infrastructure that media content providers (e.g., Video on Demand (VoD) providers) can use to obtain streaming resources that match the demand. Media content providers are charged for the amount of resources allocated (reserved) in the cloud.

II. LITERATURE REVIEW

With the Internet and communication technology, the people for multimedia communications in daily life is growing, more and more users are getting multimedia communication services through different networks and, which directly resulted in the multimedia communication network environment.

Cloud Computing Technique:

Cloud computing techniques are used to flexibly provide scalable resources to content, service providers, and process offloading to users.Thus, cloud data centres can easily provision for large-scale real-time video services as.

Quality for video services:

When the user can update the video the original video can be load on the cloud with same quality.

Literature survey is the most important step in software development process. Before developing the tool it is necessary to determine the time factor, economy n company strength. Once these things r satisfied, ten next steps are to determine which operating system and language can be used for developing the tool. Once the programmers start building the tool the programmers need lot of external support. This support can be obtained from senior programmers, from book or from websites. Before building the system the above consideration are taken into account for developing the proposed system.
System Model :
1.Media Streaming Data Module:
2.Resource Provisioning
3.PBRA algorithm design
4.DemandModules

Media Streaming Data Module:

Streaming media is multimedia that is constantly received by and presented to an end-user while being delivered by a provider. The verb "to stream" refers to the process of delivering media in this manner; the term refers to the delivery method of the medium, rather than the medium itself, and is an alternative to downloading. A client media player can begin to play the data (such as a movie) before the entire file has been transmitted. Distinguishing delivery method from the media distributed applies specifically to telecommunications networks, as most of the delivery systems are either inherently streaming. Streaming media is transmitted by a server application and received and displayed in real-time by a client application called a media player. A media player can be either an integral part of a browser, a plug-in, a separate program, or a dedicated device, such as an iPod. Frequently, video files come with embedded players. YouTube videos, for example, run in embedded Flash players.

Resource Provisioning:

Resource provisioning plan that is offered by cloud providers is referred to as on-demand plan. This plan allows the media content provider to purchase resources upon needed. The pricing model that cloud providers employ for the on-demand plan is the pay-per-use. Another type of streaming resource provisioning plans that is offered by many cloud providers is based on resource reservation. With the reservation plan, the media content provider allocates (reserves) resources in advance and pricing is charged before the resources are utilized (upon receiving the request by the cloud provider, i.e., prepaid resources). The reserved streaming resources are basically the bandwidth (streaming data-rate) at which the cloud provider guarantees to deliver to clients of the media content provider (content viewers) according to the required QoS. In general, the prices (tariffs) of the reservation plan are cheaper than those of the on-demand plan (i.e., time discount rates are only offered to the reserved (prepaid) resources).

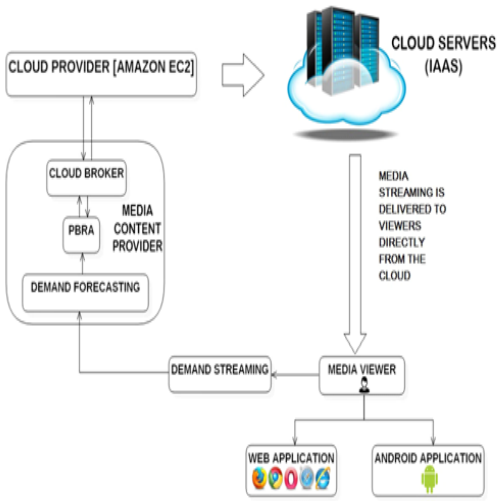
PBRA algorithm design:

This paper is a practical - easy to implement - Prediction-Based Resource Allocation algorithm (PBRA) that minimizes the monetary cost of resource reservation in the cloud by maximally exploiting discounted rates offered in the tariffs, while ensuring that sufficient resources are reserved in the cloud with some level of confidence in probabilistic sense. We first describe the system model. We formulate the problem based on the prediction of future demand for streaming capacity . We then describe the design of our proposed algorithm for solving the problem . The results of our numerical evaluations and simulations show that the proposed algorithms significantly reduce the monetary cost of resource allocations in the cloud as compared to other conventional schemes.

Demand model:

Demand forecasting module, which predicts the demand of streaming capacity for every video channel during future period of time. _ Cloud broker, which is responsible on behalf of the media content provider for both allocating the appropriate amount of resources in the cloud, and reserving the time over which the required resources are allocated. Given the demand prediction, the broker implements our proposed algorithm to make decision on resource allocations in the cloud. Both the demand forecasting module and the cloud broker are located in the media content provider site.Cloud provider, which provides the streaming resources and delivers streaming traffic directly to media viewers.

III.EXISTING SYSTEM

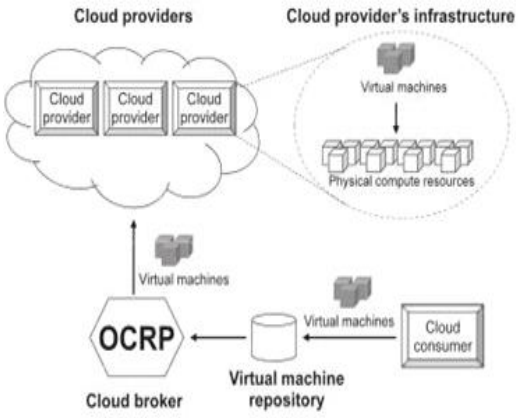


Most of the existing cloud providers employ a pricing model for the reserved resources that is based on non-linear time-discount tariffs (e.g., Amazon CloudFront and Amazon EC2). Such a pricing scheme offers discount rates depending non-linearly on the period of time during which the resources are reserved in the cloud. In this case, an open problem is to decide on both the right amount of resources reserved in the cloud, and their reservation time such that the financial cost on the media content provider is minimized.

DisAdvantages:

A prediction method has been proposed with respect to upcoming CPU utilization pattern demands based on neural networking and linear regression that is of interest in e-commerce applications. proposed a prediction method based on Radial Basis Function (RBF) networks to predict the user access demand request for web type of services in web-based applications.

Proposed System Architecture:



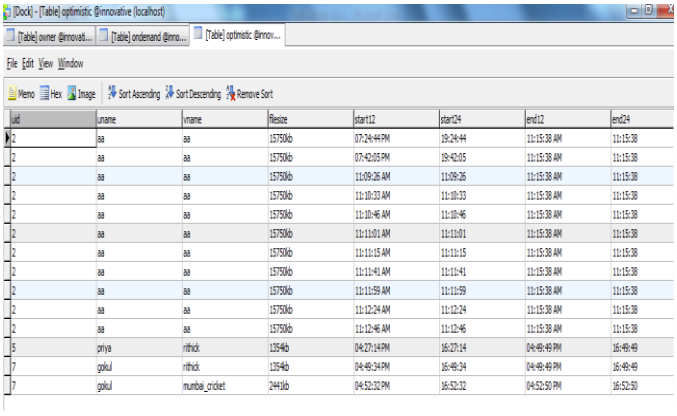
We propose a simple - easy to implement - algorithm for resource reservation that maximally exploits discounted rates offered in the tariffs, while ensuring that sufficient resources are reserved in the cloud. Based on the prediction of demand for streaming capacity, our algorithm is carefully designed to reduce the risk of making wrong resource allocation decisions. The results of our numerical evaluations and simulations show that the proposed algorithm significantly reduces the monetary cost of resource allocations in the cloud as compared to other conventional schemes.

Prediction-Based Resource Allocation algorithm (PBRA) that minimizes the monetary cost of resource reservation in the cloud by maximally exploiting discounted rates offered in the tariffs, while ensuring that sufficient resources are reserved in the cloud with some level of confidence in probabilistic sense.

Pricing Schemes:

We consider a pricing model for resource reservation in the cloud that is based on non-linear time-discount tariffs. In such a pricing scheme, the cloud service provider offers higher discount rates to the resources reserved in the cloud for longer times. Such a pricing scheme enables a cloud service provider to better utilize its abundantly available resources because it encourages consumers to reserve resources in the cloud for longer times. This pricing scheme is currently being used by many cloud providers. See for example the pricing of Virtual Machines (VM) in the reservation phase defined by Amazon EC2 in February 2010. In this case, an open problem is to decide on both the optimum amount of resources reserved in the cloud (i.e., the prepaid allocated resources), and the optimum period of time during which those resources are reserved such that the monetary cost on the media content provider is minimized.

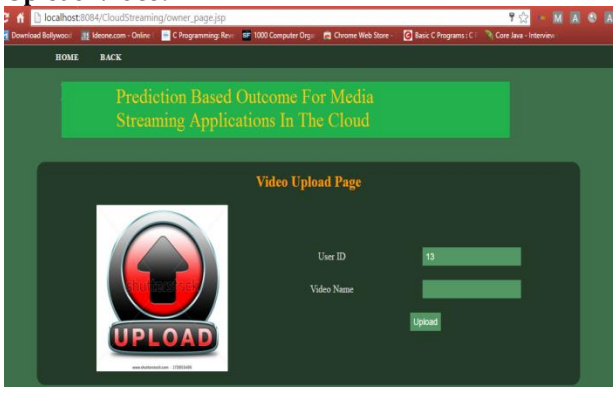
Table Name:optimistic



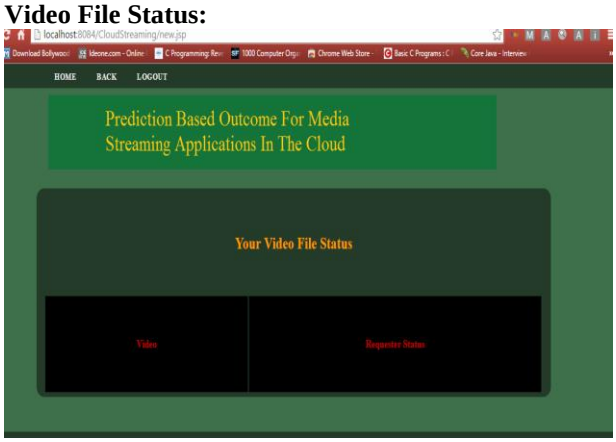
uid	uname	vname	Resize	start12	start24	end12	end24
2	aa	aa	15750kb	07:24:44 PM	19:24:44	11:15:38 AM	11:15:38
2	aa	aa	15750kb	07:42:05 PM	19:42:05	11:15:38 AM	11:15:38
2	aa	aa	15750kb	11:09:26 AM	11:09:26	11:15:38 AM	11:15:38
2	aa	aa	15750kb	11:10:33 AM	11:10:33	11:15:38 AM	11:15:38
2	aa	aa	15750kb	11:10:46 AM	11:10:46	11:15:38 AM	11:15:38
2	aa	aa	15750kb	11:11:01 AM	11:11:01	11:15:38 AM	11:15:38
2	aa	aa	15750kb	11:11:15 AM	11:11:15	11:15:38 AM	11:15:38
2	aa	aa	15750kb	11:11:41 AM	11:11:41	11:15:38 AM	11:15:38
2	aa	aa	15750kb	11:11:59 AM	11:11:59	11:15:38 AM	11:15:38
2	aa	aa	15750kb	11:12:24 AM	11:12:24	11:15:38 AM	11:15:38
2	aa	aa	15750kb	11:12:46 AM	11:12:46	11:15:38 AM	11:15:38
5	priya	nithick	1354kb	04:27:14 PM	16:27:14	04:49:49 PM	16:49:49
7	gokul	nithick	1354kb	04:49:34 PM	16:49:34	04:49:49 PM	16:49:49
7	gokul	mumbai_cricket	2441kb	04:52:32 PM	16:52:32	04:52:50 PM	16:52:50

Experimental Results:

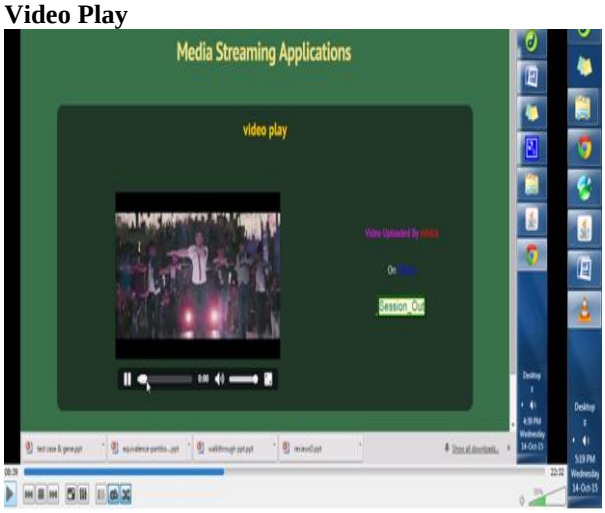
Upload Video:



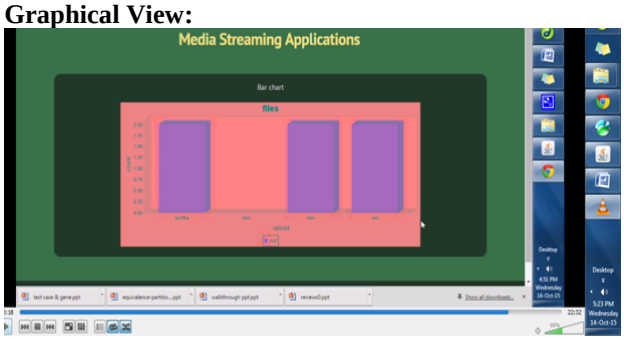
Video File Status:

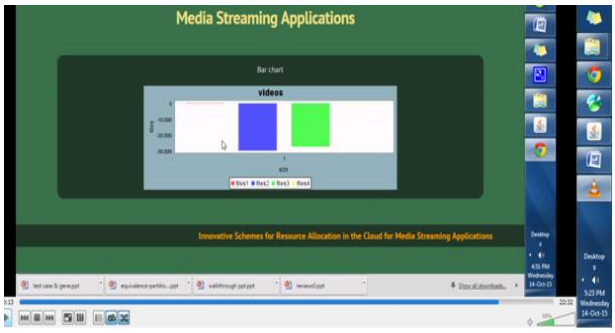


Video Play



Graphical View:





IV. CONCLUSION

In this project we have focused on quality to improve and reducing the original cost of the system which is deliver. The thesis spans the areas of cloud computing, multimedia delivery, and economics. The cloud environment provide optimal infrastructure to any use. It also provide better video sharing in social media, where the transmissions of video are highly carried out. This paper gives the overview of the streaming and sharing used by various techniques. The perfecting of videos can be improved by using scalable video coding efficiently and also by predicting users behaviour.

Refrences

1] CISCO, “Cisco Visual Networking Index : Global Mobile Data Traffic Forecast Update , 2011-2016,” Tech. Rep., 2012.

[2] Y. Li, Y. Zhang, and R. Yuan, “Measurement and Analysis of a Large Scale Commercial Mobile Internet TV System,” in ACM IMC, pp. 209–224, 2011.

[3] T. Taleb and K. Hashimoto, “MS2: A Novel Multi-Source Mobile-Streaming Architecture,” in IEEE Transaction on Broadcasting, vol. 57, no. 3, pp. 662–673, 2011.

[4] X. Wang, S. Kim, T. Kwon, H. Kim, Y. Choi, “Unveiling the BitTorrent Performance in Mobile WiMAX Networks,” in Passive and Active Measurement Conference, 2011.

[5] A. Nafaa, T. Taleb, and L. Murphy, “Forward Error Correction Adaptation Strategies for Media Streaming over Wireless Networks,” in IEEE Communications Magazine, vol. 46, no. 1, pp. 72–79, 2008.

[6] J. Fernandez, T. Taleb, M. Guizani, and N. Kato, “Bandwidth Aggregation-aware Dynamic QoS Negotiation for Real-Time Video Applications in Next-Generation Wireless Networks,” in IEEE Transaction on Multimedia, vol. 11, no. 6, pp. 1082–1093, 2009.

[7] T. Taleb, K. Kashibuchi, A. Leonardi, S. Palazzo, K. Hashimoto, N. Kato, and Y. Nemoto, “A Cross-layer Approach for An Efficient Delivery of TCP/RTP-based Multimedia Applications in Heterogeneous Wireless Networks,” in IEEE Transaction on Vehicular Technology, vol. 57, no. 6, pp. 3801–3814, 2008.

[8] K. Zhang, J. Kong, M. Qiu, and G.L Song, “Multimedia Layout Adaptation Through Grammatical Specifications,” in ACM/Springer Multimedia Systems, vol. 10, no. 3, pp.245–260, 2005.

[9] M. Wien, R. Cazoulat, A. Graffunder, A. Hutter, and P. Amon, “Real-Time System for Adaptive Video Streaming Based on SVC,” in IEEE Transactions on Circuits and Systems for Video Technology, vol. 17, no. 9, pp. 1227–1237, Sep. 2007.

[10] H. Schwarz, D. Marpe, and T. Wiegand, “Overview of the Scalable Video Coding Extension of the H.264/AVC Standard,” in IEEE Transactions on Circuits and Systems for Video Technology, vol. 17, no. 9, pp. 1103–1120, Sep. 2007.

