

Enhancing the Features of Mobile Social Mass Media on Cloud Storage

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Abstract-Now a day the mobile users are accessing the video from corresponding network service provider that leads to a drain in battery lifetime and network stability. To overcome this problem we use cloud storage in mobile devices for improvement of quality video playback using video compression algorithm. The video stored in a cloud are compressed and encoded using h.261/h.263 encoding in a desired video format for transmission. The service contain as an Infrastructure as a service (IaaS) and Platform as a Service (PaaS). The mobile devices decode the encoded video to get back the original format to achieve the better battery lifetime and highest possible quality of service.

Keywords- h.261/h.263 encoding, Infrastructure as a Service, Platform as a Service

I. INTRODUCTION

Apart from various cloud computing technologies, we have design to implement some functional features of watching online TV and videos on mobile phones.

Cloud computing providers offer some services according to several fundamental models in Infrastructure as a service (IaaS), platform as a service (PaaS). In IaaS, providers computers physical or (more often) virtual machine and other resources. IaaS clouds offer several resources such as a virtual-machine disk image library, raw (block) and file storage, firewalls, IP addresses, virtual local area networks (VLANs), and software bundles. In the PaaS models, cloud gives a computing platform, including OS etc. The developers can develop and run their software solutions on a cloud platform without the cost and complexity of buying and managing the underlying hardware and software layers.

In existing services in a cloud computing. The entire system takes about storage of data in unsorted category in cloud. Some cloud service cause more costs to access their service for storage and additional resources. The cloud computing can classified into one or more services. Each services are used for group of application bundle can be integrated to use in cloud. The three main services used in cloud computing are IaaS, PaaS, SaaS. It is natural to resort to cloud computing, the newly-emerged computing for low-cost, and agile, scalable resource supply, to support battery backup for mobile data communication. With many hardware and software resources, the cloud can unload the computation and other tasks involved in a mobile application and may significantly reduce battery consumption at the mobile devices, if a proper design is in place. There is a challenge in

front of every user is how to successfully exploit cloud services to aid mobile applications. There have been aless survey on designing mobile cloud computing systems but none of them deal in particular with stringent delay requirements for spontaneous social interactivity among mobile users.

In this paper, we design the mobile social mass media in cloud computing. The mobile users will utilize the video compression techniques in the cloud storage. Except from these techniques, we include messenger for co-activity experience.

II. PROPOSED SYSTEM

In our proposed system, we deploy in cloud system using PAAS and IAAS. In IAAS, we use VM surrogate for residing Transcoder. It is responsible for dynamically deciding how to encode the video stream in the appropriate format. Other part of IAAS is messenger; it periodically queries the social cloud for the social data on behalf of the mobile user. In PAAS, each IAAS cloud is synchronized with each other. The gateway provides authentication service for mobile user and stores user credentials in a permanent table of a MYSQL database.

The internet TV and videos are accessed by end user with advanced video compression techniques. This technique helps the user to sink the volume of video and store in cloud storage. The user can convert the video into desired format and download at any location.

Advantage of Proposed System

- *Encoding springiness:* This enables the features of adjust the selective format for user to view the videos and download.
- *Battery efficiency:* The mobile user can effective get best battery backup while accessing the video upload, convertor etc.
- *Impulsive social interactivity:* The interactivity helps the user to chat at each other while watching at same videos.
- *Movability:* Each mobile user can access all services provided by IaaS and PaaS at movable manner.

III. EXITING SYSTEM

In exiting system, each mobile device enhancing the online social video for sharing, download and upload in cloud computing. The back end process will manage to take more

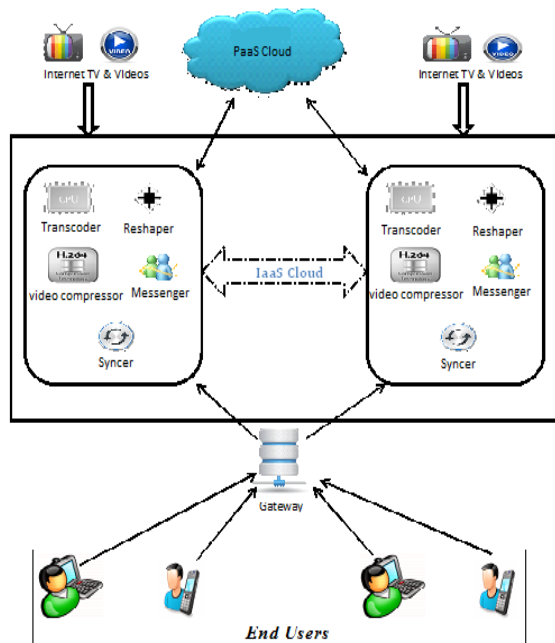
time to finish the task and it leads to consume more battery lifetime. So, it fails to watch any size of long time period of videos. The mobile platform will effectively work on selective smart mobile phones.

The online internet TV feature is not steadily work for all channels in telecommunication systems. Some Hardware and software are required for mobile user to access the TV live. Some cloud service providers will charge more cost for storing their data in cloud storage.

Disadvantage of Exiting System:

- **Task Utility:** In cloud, it fails to accept all resource to access in cloud. So it leads process to be uncompleted in cloud services.
- **Big Table:** For storing the data or file in sort format. Each cloud service providers will charge more costs for user to deploy these service to use.
- **Traffic control:** In single Gateway, the mobile user or PC users access their account in cloud. If it crosses more limited account usage in cloud storage, it leads to traffic between each other in that pathway.

IV.SYSTEMARCHITECTURE



Architecture Diagram of Enhancing Features of Mobile Social Mass Media on Cloud Storage.

V. SYSTEM MODULE

Transcoder

It resides in each surrogate, and is responsible for dynamically deciding how to encode the video stream from the video source in the desired format. Before delivery to the user, the video stream is further encapsulated into a proper transport stream. Each video is exported as MPEG-2 transport streams, which is the de facto standard nowadays to deliver digital video and audio streams.

Reshaper

Reshaper is used for deploying the changes when the mobile users access in different mobile platform like android, Symbian and windows. It helps to run the application service by both service providers in cloud computing. Every user can utilizes these reshaper for access these service at everywhere in any place.

Social Cloud

Social network is a dynamic virtual organization with inherent trust relationships between friends. This dynamic virtual organization can be created since these social networks reflect real world relationships. It allows users to interact, form connections and share information with one another. This trust can be used as a foundation for information, hardware and services share in both IaaS and PaaS Cloud.

Messenger

It is the client side of the social cloud, residing in each surrogate in the IaaS cloud. The Messenger periodically queries the social cloud for the social data on behalf of the mobile user and pre-processes the data into a light-weighted format (plain text files), at a much lower frequency. The plain text files are asynchronously delivered from the surrogate to the user in a traffic-friendly manner, i.e., little traffic is incurred. In the reverse direction, the messenger disseminates this user's messages to other users via the data store of the social cloud.

Video Compressor

In this module, mobile user can compress the video and convert the video into desired format. The video compression technique using H.261/H.263 encoding, this reduces the size of video capacity into half of the total. It will explain detailed by split and merge distribution in cloud storage.

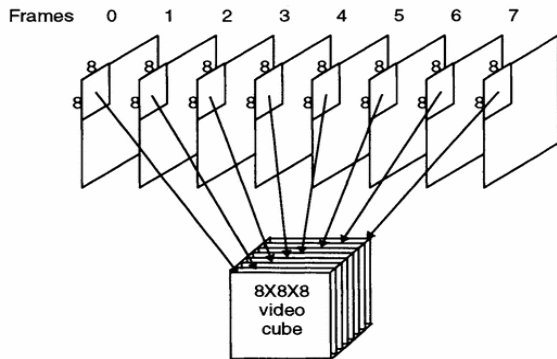
Gateway

The gateway provides authentication services for users to log in to the cloud system, and stores users' credentials in a permanent table of a MySQL database it has installed. It also stores information of the pool of currently available VMs in the IaaS cloud in another in-memory table. After a user successfully logs in to the system, a VM surrogate will be assigned from the pool to the user. The in-memory table is used to guarantee small query latencies, since the VM pool is updated frequently as the gateway reserves and destroys VM instances according to the current workload. In addition, the gateway also stores each user's friend list in a plain text file (in XML formats), which is immediately uploaded to the surrogate after it is assigned to the user.

VI. VIDEO COMPESSION IMPLEMENTATION

The video are compressed using Dirac method using H.261/H.263 encoding implementation. The Dirac method is extracted from basics of XYZ compression. The following video cube diagram splits the single video into eight frames which split and distribute to different volume in cloud storage. By using these techniques, the video size is reduced and makes more space in storage to store more video in

cloud. We make Dirac to develop into software in cloud that can be used for real-time encode and decode in image-processing applications.



Forming 8x8x8 video cube for XYZ compression.

In Dirac, the formula is expressed in lifting approximation of the Daubechies (9,7) wavelet: we have (s denoting sum and d denoting difference),

$$s_{n0} = x_{2n} \quad d_{n0} = x_{2n+1} \quad d_{n1} = d_{n0} - (6497 \cdot (s_{n0} + s_{n+10})) / 4096$$

$$s_{n1} = s_{n0} - (217 \cdot (d_{n1} + d_{n-11})) / 4096$$

$$d_{n2} = d_{n1} + (3616 \cdot (s_{n1} + s_{n+11})) / 4096$$

$$s_{n2} = s_{n1} + (1817 \cdot (d_{n2} + d_{n-12})) / 4096$$

We can expand the (5, 3) high pass filter, and get ansimilar to the Daubechies low-pass filter by having more taps in the first lifting stage. This is the Deslauriers-Dubuc (9, 7) filter:

$$d_{n1} = d_{n0} - (s_{n-10} + 9s_{n0} + 9s_{n+10} - s_{n+20}) / 16$$

$$s_{n1} = s_{n0} + (d_{n1} + d_{n-11}) / 4$$

The overall equation is used in Dirac which is calculated by sum and difference of time period of video duration. The wavelets are exploiting in dimension which divided in different filter.

VI. CONCLUSION

This paper brings out our view of mobile social mass media on cloud storage with effective resource and services by makes using of both an IaaS cloud and PaaS cloud. The framework provides efficient transcoding services for most

platforms under various network service providers. It supports for co-viewing experiences through timely chat among the mobile users. The experimental results prove the superior functional use of cloud technology in terms of transcoding, power saving, spontaneous social interactivity.

VII. FUTURE WORK

More mobile phones are coming out with advanced technology. Likewise encoding and decoding techniques may come with latest compression method which will improve the more videos can be reduced in size and streaming speed will be uploaded in high speed.

To enhance the sync and messenger in platform as a service and infrastructure as a service in cloud computing will enable the mobile user to fix some problems while it connected with more services.

REFERENCES

- [1] "Applications, Architectures, and Protocol Design Issues for Mobile Social Networks: A Survey" ,Kayastha, Nanyang Technological University, Singapore, Niyato ; Ping Wang ; Hossain, E.
- [2] "Exploiting Friendship Relations for Efficient Routing in Mobile Social Networks" Bulut, E. ; Dept. of Comput.Sci., Rensselaer Polytech. Inst., Troy, NY, USA Szymanski, B.K
- [3] "Mobile Social Networks: Architectures, Social Properties, and Key Research Challenges" Vastardis, N. ; Sch. Of Comput.Sci. & Electron. Eng., Univ. of Essex, Colchester, UK ; Kun Yang
- [4] "AMES-Cloud: A Framework of Adaptive Mobile Video Streaming and Efficient Social Video Sharing in the Clouds" Xiaofei Wang ; Dept. of Comput.Sci. & Eng., Seoul Nat. Univ., Seoul, South Korea ; Min Chen ; Kwon, T.T. ; Yang, L.T.
- [5] "Cloud-Based Multicasting with Feedback in Mobile Social Networks" Yunsheng Wang ; Dept. of Comput.Sci., Kettering Univ., Flint, MI, USA ; Jie Wu ; Wei-Shih Yang
- [6] "Improving MAC layer association through social-based metrics in mobile networks" Guardalben, L. ; DETI, Univ. of Aveiro, Aveiro, Portugal ; Gomes, T. ; Salvador, P. ; Sargento, S.
- [7] "CloudStream: Delivering high-quality streaming videos through a cloud-based SVC proxy" Zixia Huang ; Dept. of Comput. Sci., Univ. of Illinois, Urbana, IL, USA ; Chao Mei ; Li Li ; Woo, T.
- [8] "My Second Bike: A TV-Enabled Social and Interactive Riding Experience" Jaewoo Chung ; Media Lab., Massachusetts Inst. of Technol., Cambridge, MA, USA ; Kuang Xu ; Colaco, A. ; Schmandt, C.
- [9] N. Ducheneaut , R. J. Moore , L. Oehlberg , J. D. Thornton and E. Nickell "Social TV: Designing for distributed, sociable television viewing", *Int. J. Human-Comput. Interaction*, vol. 24, no. 2, pp.136 - 154 2008.
- [10] "Social interaction features for mobile TV services", Schatz, R. ; Telecommun. Res. Center Vienna, Vienna; Egger.