



## A Review on Efficient Video Sharing and Streaming in Cloud Environment using VC

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**Abstract:** The data in the media has grown for years in all current technology. The video and images play a vital role in communication worldwide. The wireless device along with the media has boomed year old technology. Using network providers and traditional service lacks quality focused and provide reliable service to mobile users in relation to the media data. Vital issues that lead to poor service providers would be low bandwidth affecting the efficient transfer of video to the user, the outage video also occurs due to low bandwidth. The video buffer time through mobile devices move from one place to another affects the smooth transmission and also share video from one user to another user through social media. Our study shows the performance of the various methods and architecture used in the cloud to provide an effective solution to provide better service to users. AMES cloud architecture is specially constructed to provide video service to the user. The study has come up with an optimal solution, proposing with cloud video, which collects video from video service providers and the provision of reliable service to the user.

**Keywords:** TFRC, AMES, VAGENT, TVB, Video Base (VB), Secure Processing, Response Time.

### I. INTRODUCTION

The era of cloud computing Queen with advances in technology, technology provides many services to human needs and urges the greatest need of the emerging technology. Cloud computing provides a platform for other advanced technologies such as big data, mobile computing to instill their service and provide quality customer service. Organization of service and extend service according to the growing needs of customers can be achieved through the cloud service and infrastructure [1, 5]. The main problem are the resources, while the service needs the resources to expand service provider plays a vital role. Invest large sum of dollars in hardware is only part of the extension, hardware maintenance along the services take tons of dollars. When the cloud provides space for the expansion of services as a service provider and can also provide a service infrastructure for service providers in small scale. In recent years the use of data has become very large extend. Studies show that the amount of data generated during the last decade is three times less than the amount of data generated in a past year.

The era of hardware limitation has vanished, new era has begun limiting hardware are not considered, but the situation is that if hardware resources are not used effectively, to maintain resources becomes a problem very serious. Data created on the host, should be sent to the cloud for storage, the problem of data transfer with these high-end multimedia data begins. In this work we will particularly focus on the videos, video - data. Processing and video transfer to the service provider and between the armies became a problem. As the use of video data in recent years have increased the

resource management service support video data needs to be controlled and expanded to provide reliable service. The trend in the technology according to changing user needs. Users are comfortable with mobile devices and laptop computers stationary [6, 9 and 10]. The problem with the provision of service to the mobile device, the user's unwillingness to get to the service user at the constant rate. Any methodology or technology that has been developed are enhanced by mobile technology, mobile devices provides various user comfortably in the provision of services. The devices themselves are useful to be used. The user does not have to be parked in a place or have to be waiting in place for the service.

The Technology of cloud computing is compatible with all of your service for mobile devices. As the type of data changes text to multimedia data such as video devices are also changing laptop smartphone [2]. Services provided by the ISP, must be provided without any commitment for users of mobile devices. The main problems faced during the study of the transmission of video and use shared reached at mobile users under cloud environment are high traffic rate, time buffering in length, and discontinuation due to limited bandwidth. The study shows the use of video or any type of media has increased during the years, and many issues have been resolved through various techniques during the traditional exchange occurred between emerging technologies. The rest of the paper is organized as follows: section 2 describes related work; Section 3 discusses proposed effective solution for video streaming and sharing on mobile users. In Section 4, gives the benchmarking study

on the performance of the various methods for the proposed solution, followed by the conclusions in Section 5.

## II. RELATED WORK

### A. Adaptive Video Streaming Techniques

In adaptive transmission rate video traffic is adjusted on the fly so that a user can experience the highest quality video possible on the basis of their ability or variable bandwidth in the time of their bond [2]. There are mainly two types of adaptive transmission techniques, depending on whether it is adaptively controlled by the client or the server. Microsoft Smooth Streaming report [27] is an adaptive streaming service live can switch between different bit rate segments Sen coded configurable bit rates and video resolutions servers while clients request dynamically based videos the local monitoring link quality. Adobe and Apple also developed adaptive HTTP Live streaming solutions on the client side that work similarly. There are also some services like adaptive streaming servers where adaptive transmission control of the video segments, for example, the adaptive live Streaming. However, most of these solutions to maintain multiple copies of video files with different bit rates, which brings huge burden of storage server.

As for rate adaptation to control techniques, methods of rate control using TCP for streaming services through mobile [28] networks are proposed [29], where the performance of a TCP flow is predicted depending on the packet loss rate, the round trip time and packet size. Given the estimated performance, the bit rate of the traffic transmission can be adjusted. A rate adaptation algorithm for video transmission 3G talk is introduced by [30]. Here are some techniques for cross-layer adaptation [31], [32], which can acquire the most accurate of link quality so that the rate adaptation can be done with more precision, is discussed. However, the servers have to always control and therefore suffer from heavy workload. Recently, the technique of H.264 Scalable Video Coding (SVC) has gained momentum [10]. A video streaming system based on adaptive SVC is deployed in [9], which studies the real-time encoding and decoding SVC PC servers. The work in [12] a distribution of scalable video quality oriented using SVC is proposed, but it is tested in a simulated LTE network. Performance wise SVC coding, Cloud Arroyo proposed primarily for high quality video streaming through a proxy cloud-based SVC [20], who found that cloud computing can significantly improve the performance of SVC encoding. Previous studies motivate us to use SVC for streaming video on the top of the cloud computing.

### B. Mobile Cloud Computing Techniques

Cloud computing has been well positioned to provide streaming video services, especially in the wired Internet due to its scalability and [13]. For example, the bandwidth is auto-scale guaranteed quality VoD streaming based on cloud computing [14] and CALM [33] framework is proposed is a media streaming service Live assisted cloud for globally distributed users. However, the expansion of cloud-based services for mobile environments requires more factors to

consider: the dynamics of wireless link, user mobility and the limited capacity of mobile devices [34], [35]. More recently, new designs for users on top of mobile computing environments in cloud, virtualized private agents who are responsible for meeting the requirements (e.g. QoS) of individual users as puffs proposed [21] and Stratus [22]. Therefore, we are motivated to design the AMES-Cloud framework using a virtual gentlemen cloud to provide services adaptive video streaming.

## III. ADAPTIVE AND EFFICIENT VIDEO STREAMING AND SHARING IN CLOUD

Fig.1 shows the architecture of the adaptive and efficient way of improving the transmission of video and video sharing mobile users. The architecture was built based on the video service provider cloud called as "AMES". The architecture contains.

**Video Service Provider (VSP):** originating location of the actual video data. Service provider uses traditional video. VSP can handle multiple applications simultaneously, while coming to the quality of service to mobile phone users, the VSP does not provide service to the mark.

**Video Cloud (VC):** the passage of the cloud is set up with many components working together virtually to get the original video data of VSP and provide reliable service for the mobile user and also provides availability and makes video sharing of those videos between users easier.

**Video Base (VB):** Base video consists of the video data is provided as a service to mobile phone users in the cloud.

**Temp Video Base (TVB):** Containing the most recently accessed data and video also contains video data is accessed more frequently.

**VAGENT:** It is an agent created for each mobile user requesting for the video service to the cloud video.

**Mobile Users:** Users who are mobile and provide service availability to its location is difficult.

Video Cloud provides services under two main methodologies for adapting mobile video streaming and efficient mobile video sharing. The streaming video and video sharing plays a vital role in the delivery of reliable customer service. The rate at which the frames of the videos are current determines the quality and availability of video service. The video data are most commonly shared between users on the network. Mobile users are most commonly used social networking sites more offense [6, 7]. The mobile device and mobile computing that provides a place to connect the social network. Multimedia data such as images and video sharing between friend and users of social media. The application of video and video sharing are two major clients requested actions. Video Cloud provides the platform to offer these two services in a better way.

The video service provider (VSP) contains the video data format, the available videos VSP can be used to service your request. But VSP does not have enough to provide quality service and a better exchange of videos between mobile devices and user resources. The Video (VC) contains cloud

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based video (VB), which collects the videos requested from the VSP and keeps a copy of the video, as well as the application of the videos can be services. Temporal video base (TVB) stores the link of the videos that you most recently accessed and frequently, providing faster links to videos of the VB access. The controller interprets the important role of work management and coordination of all components in the cloud and mobile video users [2, 7 and 10]. For each mobile user who comes to the cloud service, an agent "VAGENT" is created. This video agent is responsible for processing the user's request and delivery of server response for the user. The video link is saved VAGENT requested for retransmission and services if the same videos again required by the customer.

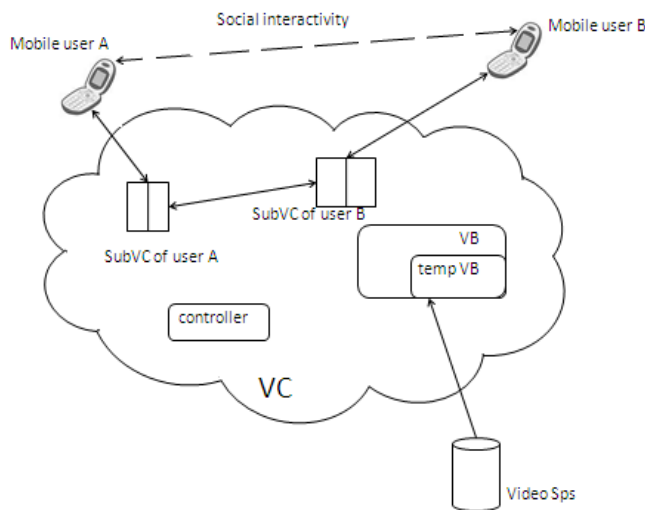


Fig.1. VC architecture.

The VAGENT can communicate with each other to provide customizable streaming services. The video source is an available connection for one VAGENT may be consulted and used by other VAGENT. The mobile user can also communicate with each other. Social interaction is performed, the monitor video exchange is also performed and was conducted through VAGENT each user. Therefore monitoring of the availability of the video source and provides the video to the requested user becomes easier. The sharing of videos on social media becomes efficient video transmission.

### IV. PERFORMANCE ANALYSIS

The performance of the cloud video is better than previously used techniques. We believe that comparing AMES TFRC Cloud and our proposed method of Video Cloud. AMES operation and VC are equal and most additional components that are loaded in reducing AMES [5]. VAGENT to perform most of the processing of streaming video sharing media. Pre VAGENTS also bring video requested by the user from TVB or VB for the provision of better services. TRFC not provide any specific means to improve service to the user, indicating how the transfer medium could be monitored and the level of bandwidth could be negotiated and data transfer can be achieved very

efficiently [3, 13]. It is considered the comparison over of services based on bandwidth and buffer time. Fig.2 shows the VC graph AMES provides better results. Interruption due to low variation and bandwidth, the buffer time on the client usually takes a long time due to the delay in the video processing from the service provider, VC offers VAGENT minimize comparatively.

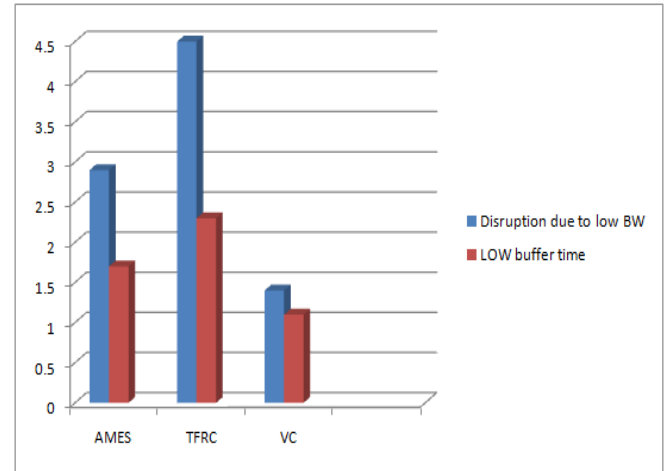


Fig.2. Comparison of performance.

### V. CONCLUSION

Multimedia data has taken great empire in the growing computer technology. The latest technology in managed devices also rapidly increasing day by day. All information and social networks are compactable on the arm of a man with mobile devices. The use of such devices also increased use change data format either text, multimedia data main video and images and audios. The most important place to transmit video most of the information in your content. The use of such video has increased long varying the years. Mobile users request video service could a video file can be called video. The service is provided by traditional service providers that have the resource of video service. But when the application number and the amount of data increases how service providers processing the application does not provide an optimal user experience. Besides these problems, there are several other issues such as interruption due to low bandwidth and buffer time unknown. Cant service provider is responsible for issues such as external references to provide a quality-oriented resource availability and customer service.

The default cloud environment provides adaptive and optimal infrastructure to any user of the cloud. The video service provider is added as one of the resources in the cloud video. The cloud base and VAGENTS plays a vital role in keeping track of the videos and update the link in order to provide uninterrupted service to customers. It also provides better video sharing on social networks, where video streams are carried out. This research gives a better study of the transmission of video and social sharing used by various technical and Video Cloud provides adaptation measures for video transmission using VAGENT and video sharing among mobile users.

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