Cloud Based Video Transcoding for Resource Allocation

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Abstract— In this Present world Video Streaming is a Big issue for electronic gadgets getting appropriate video for different electronic devices especially in the case huge amount of data that means Big data. Again it's a major issue for getting appropriate video data according to user preferences is a big challenge right now, for that reason already we have gone through another concept that is Video Transcoding but even though there is speed mismatch issues between servers and the users in This paper we are going to propose a Video Transcoding over a Cloud server according to user preferences weather it is mobile ,TV or Computer. By using this method we are designing the video modules according to user profiles we are going to test the Experimental results for quality of service, and we are checking the accuracy of video through experimental Analysis.

Keywords— Cloud computing, userprofile, online video streaming.

I. INTRODUCTION

Day by day increasing the demands of video streaming over the network for videos in the web rapidly changes the world scenario for different versions of videos. Service providers facing a lot of problems for producing the appropriate results according to user requirements. This is the challenging issue for content providers who have been working for a long time to schedule the videos simultaneously for large volumes of Data. Here there is lot of problems for storing large volumes of data it to the remote servers. Now here we will discuss about online video data that should be effectively useful when the request coming from the end users but there is lot issues with online streaming services. For that reason service providers gone through the transcoding services even though there are issues with online transcoding there is lot of time delay for the videos whatever the users request and how we are getting quality of videos with online transcoding is a big issue. So that’s why here we come up with cloud service through online. And more over cloud computing technology provides lot of services like elastic cloud and virtualization platform and formal computing resources for data applications. If we compare with content providers by using this cloud services we may get wonderful results

Online video transcoding has so many challenges here the main problem is quality of service and perfect resource utilization and streaming delay of videos. If the desired video quality is high through this video transcoding we may not get exactly whatever the video required by concluding all these points in this paper we are going to propose a video transcoding over cloud server according to user preferences.

performing all these tasks in different environments we are using profile management service this will take user preferences and store all the related user preferences in cloud environment according to requirements even though there is speed mismatch issues between cloud server and user profile in each and every video we have video chunks we are going to arrange all the chunks in queue which species the task of transcoding in the cloud environments for different hardware devices like mobiles, laptops and desktops there is problem with different devices because different devices having different configuration for this reason for different devices we are using different video content and we storing all the appropriate data according to user preference in the cloud server.

In this paper we providing live streaming service through quality and economically lower rates by using the cloud environment in the cloud server we are maintaining all the related virtual servers in order to get the appropriate videos according user requirements we are using runtime measurement algorithm [3] and finally experimental results shows that our methodology will offer low cost streaming services through effectiveness.
II. EXISTING SYSTEM

A. Transcoding

Transcoding a video data and cloud resource management [4] can be done previously and resource provisioning [5] for different methods but it does not cover video transcoding availability according to user requirements.

B. Video transcoding in cloud environment

In this scenario various methods have been proposed for system analysis for video transcoding based on cloud[6] and various methods have been proposed one of the best method is map reduce even though this method fails in lagging service oriented quality but still research is going on how to overcome this problem in present scenario[7]. There are lot of issues with cloud based video streaming services upon which we may have so many problems related to this topic[8] and manually trying to solved so many researchers but still we found so many issues. Here the scenario of cloud transcoding[9] given in some other studies.

III. PROPOSED SYSTEM

In this section we are going to discuss in detail regarding cloud based video transcoding.

There are three modules we have one is end user and cloud server and finally we have content provider first step is end user is going to requests particular video file according to requirements to the content provider here cloud server will take the request from video service provider because video content provider has the profiles of all the users according to requirements so whenever the request sent by the end user according to hardware requirements the cloud server streams a particular video content from the virtual machines in which are resides in cloud server and it provides accurate service that means quality of service is good and again it maintains speed according to user requirements.

A. End User
The end user can be anything like desktop user, mobile user, and personal laptop user. These people can request a particular video file according to user bandwidth requirements and speed of the network and so many factors involved to get the specified video file this depends on other factors in the video level it mainly depends video packets that means technically we call it as video chunks that may be stored on the cloud server and these videos can be accessed through the profile manager in content provider whatever the video we have in cloud server it is going to transcoded via virtual machines finally user can get the required video according user references with quality of service and accurate speed.

B. Content provider

Content provider is going to produce appropriate videos according to user requirements in order to implement this task we are implementing two methods one is user profile and performance task let us see in detail regarding these things.

- User profile is responsible for getting video requirements according bandwidth and resolution in with the help of cloud cluster and here according to previous data video modules are divided into different chunks and the particular chunk is delivered according bandwidth notations which are recorded in the user profile module in this way we can get appropriate video modules according to user preferences and mainly the video chunks are delayed in this process in order to avoid this we are following tunneling of all video chunks into proper channel

- Performance Task module plays a vital role to getting the appropriate video according to user preferences mainly we are going to perform the particular task like video transcoding it takes the history of video data and evaluate the preferences of video data prediction can be done through the user preferences main it compares the data that is available in cloud server and evaluate the results and take the records of particular data in this way content provider manages the records of particular video data.

C. Cloud Server

The cloud server having so many virtual machines in order to regulate video chunks and it provides different videos according to user preferences taken from the content provider and transcoding can done at the virtual machine and more over we have so many virtual machines available in our system for each resource they will provide multiple renditions of file according to cpu core and process of delivering the particular video file can be done manually through the content provider and mainly cloud cluster contains these many virtual servers these will take care of each video module and will predict the appropriate video file through the content provider.

IV. PERFORMANCE EVALUATION

We are going to implement the experimental results with help of virtual machines in cloud server so here we are taking 4 core Intel CPU processors and in this each one is working as a virtual transcoder because in this cloud environment we are using six virtual machines according to our requirements and whatever the transcoder we are using here is very efficient it process the video according to requirements and after analysis this videos are stored in the cloud server for future use and simultaneously we run the user prediction algorithm and that evaluates the performance of each and every video and transform into content provider.

Here we are comparing three videos one is television event and sports and general videos whatever the results we are getting from these three video streams we are comparing all these things with respect to two things one is video chunk size and time delay we have processed the results according to our experimental analysis for example we run the video for one hour we calculated the results and resource provisioning is done through our experimental analysis and the process of these results get closer to our prototype model we done all comparisons through real time schedulers.

Studies shows that comparing all these video chunk size and impacts of time delay shows that they are agreeing all these criterions and of course we may have reasons regarding this system here CPU cores play main role in getting the actual data according to our requirements.
V. SIMULATION EVALUATION

With the help of experimental results our propped method is working efficiently rather than normal provisioning method and here we develop time slots with discrete values as workloads and these are 5 10 20 40 according to these time streams we evaluate the results.

VI. CONCLUSION

In this paper we proposed video transcoding over cloud server to solve the issue of quality of service and maintains the speed mismatch issues between cloud server and content provider according to user preferences we have targeted the two things one is video chunk size and next time delay constraint with help of resource prediction algorithm quality of service is achieved and we perform both the experimental results and simulation evaluation for the large scale data sets we get the performance of our proposed method gets good results compared with formal method and finally our proposed method achieve good results in case of chunk size and time delay constraints

REFERENCES
