The drastic increase in the usage of handheld devices like smartphones, tablets, etc., produce huge traffic on the Internet which are mainly due to the video streaming services applications. Due to the limitations of resources (Power, Memory, Processing, etc.), numerous design patterns of the mobile devices and heterogeneous users’ expectations, it is difficult to handle those video streaming services requests. In order to provide an expected experience to the end user and to reduce the burden of the service providers, cloud computing provides the most easy and viable solution. A novel framework in cloud environment has been proposed in this paper to provide a good trade-off between the service handling as well as the user experience. The framework covers various aspects related to streaming services such as user experience, content distribution and retrieval, power usage, network analysis, video storage, device analysis on static and runtime conditions, parallel service provision and the experience perceived by user.


Index Terms

Computer Science

Distributed Systems
Keywords

Cloud Computing, Video Streaming, Quality of Experience (QoE), Transcoding, Cloudlet.