IEEE ICME 2015 Workshop, 3rd of July 2015

Cloud-based Media

Scope

Real-Time applications are fuelling a new wave of IP convergence, necessitating a fresh look at network architecture. Video, or multimedia in general, is inevitably migrating online. To provide rich media services, multimedia computing has emerged as a technology to generate, edit, process, and search media contents, such as images, video, audio, graphics, and so on. Typical type of cloud-based services are the following: IaaS, NaaS, PaaS, IPMaaS, DaaS, and SaaS. In the same manner, future networks meets cloud via Network Function Virtualization and Software Defined Networking (SDN).

Prosumers' potential for hosting, delivering and interacting with Media Events requires a rich pool of resources and also a flexible set of provisions and guarantees upon users' request. Towards this direction, Cloud Computing arises as a promising solution, being able to reserve assets on demand and guarantee their provision over time. Existing resource reservation techniques are based either on a "fixed" model, so that to accommodate the anticipated peak demand but with low resource utilization during non-peak times, or on a "pay-as-you-go" model, where the cost is estimated for the total amount of information transferred, but subject to variation due to contention from other applications in the Cloud Data Centre.

Decoupling hardware and software through virtualization is the most important reason for content providers to shift towards the cloud. The applications can be available always on, low in cost, on demand, massively scalable and pay as you grow among users with heterogeneous capabilities and characteristics. This will be accomplished through the design and development of an abstraction entity that is responsible to manage the media resources and the network capabilities, acting as a mediator between the client application and the media-aware cloud. The content can be processed to meet the device capabilities and the backhaul network bandwidth by aggregating requests from the end-users...

The aim of this workshop is to collect research papers in the following areas:

- Multi-tier cloud service layer interactions
- xaaS for media services
- Cloud media service platforms
- Cloud resource optimization and dynamic migration for media applications
- Visual signal pre-processing, compression and post-processing over the cloud
- Cloud-based 3D, immersive, and augmented reality applications
- Cloud-based CDN and distributed caching
- SDN-based media streaming & cloud-based networking for media applications
- Mobile multimedia cloud computing
- xaaS real-time monitoring and management
- Multimedia cloud computing and social media interactions
- Modeling and performance evaluation for cloud-based media systems
- QoE experience over advanced cloud computing infrastructure and services
- Security and privacy issues
- Cloud-based threats and vulnerabilities

Important Dates

Paper submission deadline: 30 March 2015
Paper acceptance notification: 30 April 2015
Paper camera ready due: 15 May 2015

Workshop Chairs

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