

## International Workshop on Cloud Convergence: challenges for future infrastructures and services

workshop held within  
ICC 2013 - IEEE International Conference on Communications, June 9-13, 2013

### Call for Papers ([Call for Papers.pdf](#))

Cloud systems were thought to efficiently provide computing and storage services, but nowadays are ready to evolve towards more general infrastructures where innovative services can be provided in a distributed and scalable way, possibly involving millions of smart sensors and/or with several degrees of QoS requirements. This means that applications and services that were strongly influenced only by computation or communication, today require a special attention on both sides. Moreover, advancements in one field may drive and stimulate progress in the other and vice-versa. It is therefore necessary a strong collaboration between computing and communication communities in order to effectively control this ongoing evolution in the cloud computing paradigm and properly define the cloud and network infrastructure of the future.

Several examples exist where wireless sensor networks, mobile equipments, RFID tags, home appliances, cars and many other daily objects talk to each other, exchange information, generate aggregate knowledge and allow to quickly develop new advanced services for the final user. A comprehensive reference scenario are smart grids, i.e. electricity networks that can intelligently integrate the behaviour and actions of all objects connected in order to efficiently deliver sustainable, economic and secure electricity supplies using a two-way digital communication technology. The IoT requires powerful networking environments on one side and sophisticated data aggregation and processing technologies on the other. As sensing technologies perceive the world without human intervention, the amount of generated data is far beyond the one we are used to, where operators traditionally provide input data. Thus, the IoT is becoming a unifying concept where sensing, computing, and web technologies converge, interact and integrate each other.

A very demanding application for current Internet is represented by advanced multimedia services that generate a traffic that is rapidly increasing; in particular, singlecast video streaming is now very common thanks to services like YouTube, video on demand contents in commercial TV web sites, e-learning platforms. The connectionless IP infrastructure of the Internet does not provide any definitive solution to efficiently handle the high bandwidth requirements coming from these applications, and to trigger congestion avoidance mechanisms packets must be lost. Most of the inefficiencies coming from current architectures could be overcome, in the Future Internet, by a higher level of cooperation between end nodes (multimedia applications) and intermediate systems (IP routers). This will require a partial overcoming of the current layered paradigm, in favor of new paradigms with cross-layer and cross-networks collaboration and interaction.

The WCC workshop aims to facilitate the interaction and cross-fertilization among these broad communities and to discuss research challenges related to the convergence of cloud computing, future communication systems/infrastructure/technologies, multimedia services (the killer application for both communication and computing facilities), and the highly distributed network of smart sensors and tags.

The WCC workshop seeks original contributions from both research and industry experience describing either innovative research and novel solutions, or an experience in the field of infrastructures and services.

Topics of interest, of both theoretical and practical significance, include but are not limited to:

- machine-to-machine (M2M) interaction
- Internet of Things
- interaction between sensor networks and Cloud
- multi-site Cloud and Cloud federations
- mobile Cloud, mobile Cloud media computing
- design and development of Cloud on multicore architectures
- \*-aaS
- new paradigms for infrastructures (e.g., RFC 6077 challenges)
- multimedia services and others demanding applications
- context-aware infrastructures, services and applications
- augmented reality
- isochronous applications
- critical applications (e.g. the use of Cloud platforms in critical sectors such as finance, energy, transportation, health)
- convergence and integration of Infrastructure and Services (Cloud, SOA/IoS/WoS, IoT, IoC, etc.)
- scalability, mobility, probing, heterogeneity
- QoS and SLA management, metering, monitoring, enforcement
- crosscutting concerns, e.g., pervasiveness, context- and resource-awareness, semantic- awareness, seamlessness, adaptiveness, energy-awareness

### Important Dates

Abstract registration:  
January 25, 2013

Paper Submission: January  
25, 2013 (23:59 PST)

Notification of acceptance:  
February 22, 2013

Camera-Ready: March 8,  
2013

Workshop: 9-13 June 2013

- autonomic management of resources and services
- Cloud-enabled real-time communication services
- Cloud-enabled networks and Software Defined Networking
- smart grid technologies
- cyber security for smart grid data and control data streams
- real-time communication with smart objects
- searching and discovering things and their services on the Web

Besides regular papers, papers describing work in progress or incomplete but sound new innovative ideas related to the workshop theme are also encouraged.

#### **Important Dates**

Abstract registration: ~~January 4, 2013~~ **extended** 25 January 2013  
Paper Submission: ~~January 11, 2013 (23:59 PST)~~ **extended** 25 January 2013  
Notification of acceptance: February 22, 2013  
Camera-Ready: March 8, 2013  
Workshop: 9-13 June 2013

#### **Publication**

Proceedings of WCC2013 will be published by IEEE Communication Society (EI indexed) as part of the IEEE ICC 2013 workshops.

**Website:** <http://wcc2013.uniud.it>

#### **Paper submission guidelines**

Submission page: <http://wcc2013.uniud.it/WCC2013/Submission.html>

All submissions should be written in English with a maximum paper length of five (5) printed pages (10-point font) including figures, without incurring additional page charges. One (1) additional page is allowed with a charge of USD100, if accepted. Papers exceeding 6 pages will not be accepted, nor reviewed at all.

Standard IEEE conference templates for Microsoft Word or LaTeX formats are found at [http://www.ieee.org/conferences\\_events/conferences/publishing/templates.html](http://www.ieee.org/conferences_events/conferences/publishing/templates.html)  
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[http://www.ieee-icc.org/2013/submguide\\_4\\_3681498946.doc](http://www.ieee-icc.org/2013/submguide_4_3681498946.doc)  
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For any question, please contact the organizers: [wcc2013@uniud.it](mailto:wcc2013@uniud.it)

