



Call for Papers
ACM/Springer Mobile Networks & Applications (MONET)

SPECIAL ISSUE ON
Cloud-assisted Industrial Systems and Applications

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Overview

In recent years, cloud systems can provide flexible and on-need basis processing of vast amounts of data, as well as provisioning of other value-added services using Internet technologies. Cloud-based approaches will be applicable to all aspects of modern industrial systems, their applications and interactions in the large-scale systems. It is very necessary that more flexible infrastructure is designed to enhance performance, reliability and scalability in complex industrial systems. However, the majority of current cloud systems and the corresponding techniques primarily aim at the Internet-based applications. The complex industrial systems give rise to some new issues and challenges to cloud computing since they are significantly different from those service-oriented Internet-based applications due to their inherent features (e.g., workload variations, process control, environment configurations, resource requirements, and life-cycle management).

Targeting such characteristics, the crucial problems to improve the performance of cloud-assisted industrial systems are supposed to be considered. These problems involves 1) design virtualized resource management techniques for complex industrial systems in the cloud environment; 2) build a new cloud resource organization model for the characteristics of complex industrial systems; and 3) schedule the cloud resources in order to enhance the performance of cloud-assisted industrial systems. To solve these problems, this special issue will mainly focus on the following aspects, including application-driven heterogeneous resource organization, feature-aware multi-dimensional resource scheduling, efficient virtualization techniques for resource management, etc.

Topics

This special issue on “Cloud-Assisted Industrial Systems and Applications” has a wide scope that includes the development, adoption and application of cloud technology. Topics include, but are not limited to, the following research topics and technologies:

- Virtualized resource management techniques for industrial applications
- Large scale industrial analytics, monitoring, management and control
- Cloud resource organization model
- Cloud-assisted SCADA and DCS systems
- Cloud-based factory of the future
- Cloud-integrated Cyber-Physical Systems
- Data security (e.g., transmission, processing and storage)
- Dependability (e.g., safety, reliability, and availability) of cloud technologies
- Value-added cloud-based services
- Scheduling of the cloud resources for industrial applications
- Public cloud architectures for industrial applications
- Simulation tools
- Implementation of Industry 4.0
- Prototype of cloud-assisted industrial systems and applications

Important Dates

- **Manuscript submission deadline:** January 1st, 2016
- Notification of acceptance: March 1st, 2016
- Submission of final revised paper: April 1st, 2016
- Publication of special issue: 2st Quarter, 2016

Submission Procedure

Authors should follow the MONET Journal manuscript format at the journal site:

<http://www.springer.com/engineering/signals/journal/11036>. Manuscripts are submitted on line through <http://www.editorialmanager.com/mone/>. When submitting papers, authors should choose article type as "SM 166 - Cloud-assisted Industrial Systems and Applications (IndustrialIoT 2016)". A copy of the manuscript should also be emailed to the following email: jiafuwan_76@163.com. The "subject field" of the email must contain "MONET Industrial IoT Paper - ".

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