

Call for Papers
Special Issue on Edge/Fog Computing and Services
IEEE Transactions on Services Computing

The emerging Internet of Things (IoT) and rich cloud services have helped create the need for edge/fog computing, in which data processing occurs in part at the network edge or anywhere along the cloud-to-endpoint continuum that can best meet user requirements, rather than completely in a relatively small number of massive clouds. Edge/fog computing could address latency concerns, devices' limited processing/storage capabilities and battery life, network bandwidth constraints and costs, and many security and privacy concerns that arise from the emerging IoT.

The new edge/fog computing paradigm enables the allocation and control of computing resources and services to be distributed closer to the users. Software distributions for various applications can now be hosted by edge/fog servers, e.g., image processing packages for preprocessing images in video surveillance applications. Operating systems and the associated services can be offered through nearby edge/fog servers to reduce round trip latency. Equipment outsourcing, such as storage, hardware, servers, and networking components can also be provisioned through edge/fog servers. Edge/fog servers complement datacenter cloud services in terms of cost and performance optimization.

Many new problems arise in enabling edge/fog computing and services, creating a fertile ground for research and innovation. We are prompted to design new algorithmic, mathematical, statistical and computational methods to solve services computing problems on this new architecture. Service creation, development, and management, web services, business processes, and so on, need to be carefully redesigned. In addition, the new edge/fog computing architecture can further provide new solutions to hard problems in the existing architectural framework, e.g., IoT services, security, and privacy.

This special issue aims at the latest and novel contributions from industry practitioners and academic researchers in this new and exciting area.

Topics of Interest to the Special Issue include but not limited to:

- edge/fog service architecture (including operations and business support)
- edge/fog service discovery, synchronization, and accountability/monetization
- edge/fog-to-cloud APIs and protocols
- software-defined edge/fog computing
- mobility, connectivity, heterogeneity support for edge/fog services
- distributed edge/fog management (e.g. scalability, energy, security, and privacy)
- programmability, programming models, and tools
- novel fog/edge applications and services with trials/experimental results

Important Dates (with extended submission deadline)

Submission Deadline: December 15, 2017
Decision Announcement: February 28, 2018
Manuscript Revision: April 30, 2018
Camera-ready Version: May 31, 2018

Submission Guidelines

Authors interested in submitting papers to the special issue submit their full papers through the TSC online system website (<https://mc.manuscriptcentral.com/tsc-cs>) and select “SI on Edge/Fog Computing and Services.” Author guidelines are available at the TSC website (<http://www.computer.org/tsc>). Every accepted manuscript should not exceed 14 pages. *Extended version of a relevant conference paper must include sufficient new research contributions with a cover letter summarizing the new contributions with respect to the published conference paper.* Minor revision of a conference paper, for example, would not be considered based upon an automated overlap detection process.

Guest Editors

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