

# Call for Papers

## Computer Networks Special Issue on Resource Management in Virtualized Data Centers

### Guest Editors:

Dr. Krishna Kant, Intel Corporation, Hillsboro OR (Krishna.Kant@intel.com)

Dr. Bhuvan Urgaonkar, Pennsylvania State University (Bhuvan@cse.psu.edu)

### Purpose and Significance:

As online services permeate every facet of life, data centers continue to grow in size, complexity and power consumption. The emerging view of data centers is one of a utility computing environment, where the physical infrastructure (the “server farm”) may be outsourced and shared among many different customers. In this case, the set of applications belonging to a customer (and perhaps individual applications themselves) are likely to be assigned to a virtual rather than a real cluster of servers. A virtual cluster in this context is a set of real or virtual machines connected via QoS-controlled virtual communication paths. The virtual cluster could grow, shrink or change its resource mapping dynamically depending on the application needs and global availability of resources. Other than computing, storage and networking, important “resources” increasingly include electric power and special purpose accelerators. Such a model leads to a variety of new challenges in multiple areas including networking, QoS, dynamic resource management, isolation/security, etc. This issue of Computer Networks intends to focus on these challenges and solicits papers in relevant areas, including, but not limited to, the following:

- Light-weight, high-speed networking protocols supporting advanced QoS schemes.
- Emerging networking technologies applied to data centers (Optical, UWB, WLAN, 60GHz, etc.)
- Dynamic provisioning of resources for virtual clusters.
- Isolation and security issues in virtualized data centers.
- Acceleration technologies for networking, security, resource management, etc.
- Power/thermal issues in data center resource management.
- Network protocol support for virtualization, power efficiency, dynamic QoS, and other features.
- Virtualization techniques for machine, network and storage.
- Issues in large scale data management

### Submissions

Prospective authors must prepare their papers according to the “Guide to Authors” available at <http://www.elsevier.com/locate/comnet>, and upload their papers to <http://www.editorialmanager.com/comne>, choosing the Article Type: **SI-Virtualized Data Centers**.

Manuscripts should be clearly organized, written in good English and describe original research that has not yet been published nor currently under review by other journals or conferences. Papers must be in single-column format, double-spaced, and use at least 11 pt fonts, and should not exceed 25 pages including references. Requests for further information may be addressed to the guest editors.

### Important Dates

Submission deadline: August 03, 2008

Acceptance Notification: November 03, 2008

Final revised manuscripts due: December 14, 2008

Publication date: July 2009