

Cloud Computing

Call for Book Chapters



Introduction

Cloud computing has recently emerged as one of the buzzwords in the ICT industry. Several IT vendors are promising to offer computation, data/storage, and application hosting services, and provide coverage in several continents, offering Service-Level Agreements (SLA) backed performance and uptime promises for their services. While these ‘clouds’ are the natural evolution of traditional clusters and data centers, they are distinguished by following a ‘utility’ pricing model where customers are charged based on their utilisation of computational resources, storage and transfer of data. They offer subscription-based access to infrastructure, platforms, and applications that are popularly termed as IaaS (Infrastructure as a Service), PaaS (Platform as a Service), and SaaS (Software as a Service). Whilst these emerging services have reduced the cost of computation, application hosting and content storage and delivery by several orders of magnitude, there is significant complexity involved in ensuring applications, services and data can scale when needed to ensure consistent and reliable operation under peak loads.

Objectives

The primary purpose of this book is to capture the state-of-the-art in Cloud Computing technologies and applications. The book will also aim to identify potential research directions and technologies that will facilitate creation a global market-place of cloud computing services supporting scientific, industrial, business, and consumer applications. We expect the book to serve as a reference for larger audience such as systems architects, practitioners, developers, new researchers and graduate level students.

Topics of Interest

Topics for potential chapters include, but are not limited to:

- Novel architectural models for cloud computing
- Service and Utility-oriented platforms for Cloud computing
- Types of Clouds and Services
- Security, Privacy, and Trust management issues
- Cloud Economics and Business Models
- Resource management and scheduling
- QoS (Quality of Service) and Resource Allocation
- Virtual Machines Provisioning and migration services
- Support for Market-Aware Cloud Services
- Pricing Schemes and Risk Management
- SLA (Service Level Agreements) negotiation and management
- Accounting, Billing and Verification Infrastructure

- New programming models for cloud computing
- Tools and technologies building different types of Clouds
- Interoperability between Clouds
- Internetworking between Clouds (InterClouds)
- Building and Deploying Social Network Applications on Clouds
- Portability of applications and data between different cloud providers
- Reliability of applications and services running on the cloud
- Performance monitoring for cloud applications
- Content Delivery Networks using Storage Clouds
- Building and Hosting Internet Service Applications on Cloud
- Scientific computing in the cloud
- Workflows for cloud computing
- Experience with Building and Using Cloud Infrastructure
- Legal issues in Cloud Computing
- Business Computing on Clouds
- Consumer computing on Clouds
- Novel applications of cloud computing

Important Dates - Proposed

Chapter Proposal: You are invited to submit a 1-2 pages proposal describing the topic of your chapter. The proposal should include the chapter organization, anticipated number of pages of the final manuscript and brief biography of authors. We plan to follow the timeline given below:

- * Proposal deadline: May 30, 2009 (**Early expression of interest is highly encouraged**)
- * Notification of proposal acceptance: June 30, 2009
- * Full draft chapter submission: Aug. 30, 2009
- * Chapter review report to authors: Sept. 20, 2009
- * Final version submission: Oct. 20, 2009

However, early submission is highly appreciated as the editors would like to have progressive dialogue and work with prospective authors to bring out a book of wide appeal.

If we receive more than one proposal for a chapter on the same topic, the editors may request authors to collaborate to develop an integrated chapter.

Manuscript Submission

Each accepted chapter should be about 20-35 A4 pages. We expect to deliver CRC of the book to the publisher, a MS Word template will be provided later.

Primary Editor – Contact Person:

Dr. Rajkumar Buyya

CEO, Manjrasoft, Melbourne, Australia: <http://www.manjrasoft.com>

Director, Grid Computing and Distributed Systems Laboratory

Dept. of Computer Science and Software Engineering

The University of Melbourne, Australia

Email: raj@csse.unimelb.edu.au

Co-Editors:

Dr. James Broberg

Grid Computing and Distributed Systems Laboratory

Dept. of Computer Science and Software Engineering

The University of Melbourne, Australia

Email: brobergj@csse.unimelb.edu.au

Prof. Andrzej M. Goscinski

School of Information Technology

Deakin University, Geelong, Australia

Email: ang@deakin.edu.au

Editorial Advisory Board

- Dr. Geng Li, CISCO Systems, USA
- Prof. Manish Parashar, Rutgers: The State University of New Jersey, USA
- Dr. Wolfgang Gentzsch, Max-Planck-Gesellschaft, München, Germany
- Prof. Omer Rana, Cardiff University, UK
- Prof. Hai Jin, Huazhong University of Science and Technology, China
- Dr. Simon See, Sun Microsystems, Singapore
- Dr. Greg Pfister, Distinguished Engineer, IBM, USA (retd.)
- Prof. Ignacio M. Llorente, Universidad Complutense de Madrid, Spain
- Prof. Geoffrey Fox, Indiana University, USA
- Dr. Walfredo Cirne, Google, USA