*** Call for Papers ***
Springer Journal of Grid Computing
Special Issue on Interoperability, Federation, Frameworks and
Application Programming Interfaces for IaaS Clouds
http://cac.hpcc.ttu.edu/jogc/cloud-interop-2012/

The Special Issue on Interoperability, Federation, Frameworks and Application Programming Interfaces for Infrastructure-as-a-Service (IaaS) Clouds will highlight foundational standards and application programmer interfaces (APIs) useful for large-scale, scalable distributed computing. This issue will provide the community with dedicated forum, within the prestigious Springer Journal of Grid Computing, for presenting new research, development, and deployment efforts in running interoperable, federated IaaS cloud systems. Priority will be given to submissions that focus on presenting solutions to challenges faced by current and future infrastructure cloud toolkits and APIs, and on frameworks that allow their use across a broad range of platforms and user communities.

Large commercial cloud providers and standards organizations, multi-user and multi-organization infrastructure providers and users are welcome to submit to this issue to provide formal descriptions of their existing and proposed solutions. The increasingly large range of choices and availability of IaaS toolkits has also allowed creation of cloud solutions and frameworks suitable for private deployment and practical use even on smaller scales. As a result, many academic infrastructure service providers have started to their transition to add cloud resources to their previously existing campus and shared grid deployments. To be successful, such solutions should also support the unification of cloud and/or cloud+grid solutions in a seamless, preferably interoperable way. Priority in selection will be given to papers that document and present measured comparisons or practical information on realistic, real-world solutions.

We believe this venue will be an excellent place to help the community define the current state, determine future goals, and present architectures and service frameworks to achieve highly interoperable federated cloud infrastructures.

PROPOSED EXAMPLE TOPICS

- Case studies of interoperable and federated solutions across multiple infrastructures
- Application Programmer Interfaces and standards for interoperability and federation
- Experience from operating infrastructure clouds as part of one or more federations
- Practical experiences in energy-efficiency or other benefits from cloud federation
- Virtual machine deployment and migration solutions across cloud boundaries
- Federation-compatible service agreements, SLAs and quality of service control systems
- Virtual machine scheduling and management algorithms in federated systems
- Federation and interoperability challenges of mixed grid and cloud systems
- Construction and management of cross-domain HPC virtual infrastructures

- Accounting and identity management solutions that support federation-level models
- Performance evaluation and comparison across multiple federated cloud systems
- New programming models and standards for interoperable cloud computing systems
- Scalability issues and comparisons of different cloud federation approaches
- Security problems, considerations and solutions for hybrid mixed public/private clouds
- Storage management, focusing on interoperability and multi cloud placement

Important Dates

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*   Papers Due: November 30, 2012
*   First Round Decisions: February 1, 2013
*   Major Revisions if needed: April 1, 2013
*   Second Round Decisions: June 1, 2013
*   Minor Revisions if needed: July 15, 2013
*   Final Decision: July 30, 2013
*   Publication Date: September 2013

PAPER SUBMISSION

Authors are invited to submit original and unpublished technical papers. All submissions will be peer-reviewed and judged on correctness, originality, technical strength, significance, quality of presentation, and relevance to the special issue topics of interest. Submitted papers may not have appeared in or be under consideration for another workshop, conference or a journal, nor may they be under review or submitted to another forum during the review process. Submitted papers may not exceed 20 single-spaced double-column pages using 10-point size font on 8.5x11 inch pages (1" margins), including figures, tables, and references; note that accepted papers will likely be between 15 to 20 pages, depending on a variety of factors.

Manuscripts must be formatted along the guidelines for authors of the Journal of Grid Computing (http://www.springer.com/journal/10723) and must be submitted online under http://www.editorialmanager.com/grid indicating that they are targeted to the Cloud Federation special issue.

Guest Editors

Special Issue Guest Editors
*   Alan Sill (alan.sill@ttu.edu), Texas Tech University & Open Grid Forum
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