



Call for Papers

Special Section on Networks for Grid Applications

Grid developers and practitioners are increasingly realising the importance of an efficient network support. Entire classes of applications would greatly benefit by a network-aware Grid middleware, able to effectively manage the network resource in terms of scheduling, access and use. Conversely, the peculiar requirements of Grid applications provide stimulating drivers for new challenging research towards the development of Grid-aware networks.

Cooperation between Grid middleware and network infrastructure driven by a common control plane is a key factor to effectively empower the global Grid platform for the execution of network-intensive applications, requiring massive data transfers, very fast and low-latency connections, and stable and guaranteed transmission rates. Big e-science projects, as well as industrial and engineering applications for data analysis, image processing, multimedia, or visualisation just to name a few are awaiting an efficient Grid network support. They would be boosted by a global Grid platform enabling end-to-end dynamic bandwidth allocation, broadband and low-latency access, interdomain access control, and other network performance monitoring capabilities.

As a natural extension of the discussion forum provided by the Gridnets conference series, this special section aims at gathering top-quality contributions to the most debated topics currently tackled in Grid networking research. Topics include, but are not limited to:

- * Network architectures and technologies for grids
- * The network as a first class Grid resource: network resource information publication, brokering and co-scheduling with other Grid resources
- * Interaction of the network with distributed data management systems
- * Network monitoring, traffic characterisation and performance analysis
- * Inter-layer interactions: optical layer with higher layer protocols, integration among layers
- * Experience with pre-production Grid network infrastructures and exchange points
- * Peer-to-peer network enhancements applied to the Grid
- * Network support for wireless and ad hoc grids
- * Data replication and multicasting strategies and novel data transport protocols
- * Fault-tolerance, self healing networks
- * Security and scalability issues when connecting a large number of sites within a virtual organization VPN
- * Simulations
- * New concepts and requirements which may fundamentally reshape the evolution of Networks.
- * Integration of advanced optical networking technologies into the Grid environment
- * End to end lightpath provisioning software systems and emergent standards

2. Submission of Papers

The submitted papers should present original work that should not have been published or be under review elsewhere. Papers concerning works presented at the Gridnets 2007 conference can be submitted, provided that new and original results are included. The submitted paper must be formatted according to the formatting rules of the FGCS (<http://www.elsevier.com/locate/fgcs>). Please follow the FGCS guidelines for more information on paper submission, at http://www.elsevier.com/framework_products/promis_misc/gfafuture.pdf

The files should be submitted through the website <http://ees.elsevier.com/fgcs/>. Please register at the website and upload editable source files for manuscript and figures, providing the special section title and guest editor name, and selecting the article type that belonging to the special section. Also include vitae (short biographies and photographs) for all authors. The system will then prepare a pdf file for approval. When the "approval" button is clicked, the paper will be submitted.

Please include a cover page which lists the following:

- Title of paper
- Name and affiliation of corresponding author.
- Address and e-mail address of each author.
- Name and affiliation of all authors.
- Address and e-mail address of corresponding author.
- Abstract of paper.
- A maximum of 5 keywords.

3. Important Dates

Deadline for paper submission: November 9, 2007

Notification of acceptance: December 14, 2007

Final paper due: January 25, 2008

Publication To be determined

Guest Editors:

Pascale Vicat-Blanc Primet (pascale.primet@ens-lyon.fr)
INRIA, ENS-Lyon

Michael Welzl (michael.welzl@uibk.ac.at)
University of Innsbruck

Piero Spinnato (piero.spinnato@lngs.infn.it)
LNGS - INFN

Chris Edwards (ce@comp.lancs.ac.uk)
Lancaster University