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Grid**Connections**
February 2008
News and Information for the Open Grid Forum Community

Breaking News – Irving Wladawsky-Berger Keynote Added to OGF22 Program
Irving Wladawsky-Berger, Chairman Emeritus of the IBM Academy, will keynote Wednesday's program at 1:15 PM. He will present "Cloud Computing, Grids and the upcoming Cambrian Explosion in IT". Irving is well known for his early leadership of the internet, Linux and Grids and was an early contributor to GGF.

OGF Launches Thought Leadership Series
OGF recently launched its new thought leadership series to give thought leaders in OGF and the greater Grid and distributed computing community the opportunity to express their ideas, opinions and perspectives in an online public forum. One of the main goals of the series is to stimulate discussion and provoke lively debate on a broad range of hot topics and issues facing the grid and distributed computing community.

Wolfgang Gentzsch, Coordinator of the German D-Grid Initiative; Geoffrey Fox and Marlon Pierce, from the Community Grids Laboratory at Indiana University; and Ian Foster from Argonne National Lab and University of Chicago, have helped us kick-off the series with an interesting range of articles that provide a flavor of the diverse subject matter OGF hopes to address. Wolfgang's article outlines the "Top 10 Rules for Building a Sustainable Grid". Geoffrey and Marlon tackle the hard issues, "Too much Computing, Too much Data and Never too much Simplicity", facing the Grid community as emerging new computing resources and alternative approaches change the overall landscape. Ian Foster's article, "There's Grids in them thar Clouds" discusses whether or not "cloud computing" is just a new name for grid.

OGF welcomes everyone to comment and encourages all thought leaders in the Grid and distributed computing community to submit articles for this series. Submitting is easy to do, simply email it to thoughtleadership@ogf.org.

GLUE Q&A with Working Group Co-chair Sergio Andreozzi

GLUE is one of OGF's newer working groups, having formed in January 07. Over the past year, the team has been very active, working to facilitate interoperation between Grid infrastructures via enabling the development of interoperating Grid middleware components in response to existing use cases. GridConnections recently caught up with Sergio Andreozzi at the Management Developer's conference to get an update on their progress:

GridConnections: What is GLUE?

Sergio Andreozzi: GLUE is about information interoperability in the Grid context, a key building block to enable services to become aware of each other in terms of capabilities and functional states. Some of the questions that we try to answer are: how does a meta-scheduler discover available computing resources, execution environment characteristics, and protocols? How does a visualization tool build views of the available resources? How is information defined and structured to enable exchange among services?

The second generation of the GLUE Information Model is being designed in the context of OGF in order to leverage the existing solutions defined by various Grid projects and with the aim to unify them into a recommendation, thus adding one more piece to the puzzle of standard-based interoperability. This is important for many actors of Grid systems: middleware developers, so they have a clear definition of what is important to measure and expose; end-users, so they know the terms to use when specifying the requirements for their applications; and Virtual Organization managers and Grid operators, so they can compare the resources from different administrative domains.

GridConnections: What is the timescale for this specification and who do you expect will be the early adopters?

Sergio Andreozzi: By OGF22 (February 25-28, Cambridge, MA) we expect to have a mature proposal to be presented and, based on the feedback that we receive, we plan to publish it for public comment just afterwards. In the context of the OMII-Europe project, we are already implementing the specification and we are building a framework (codename GLUEMan) to manage information providers for GLUE 2.0 leveraging WBEM technologies. The early implementation is meant for early evaluation of both the information model and the various renderings that will be defined by the group (e.g., XML Schema, LDAP, SQL). Early adopters will be the projects participating in the GLUE 2.0 definition, among them EGEE, UNICORE, ARC, TERAGRID, D-Grid and AustralianGrid.

GridConnections: What lessons did you learn as you were developing this specification?

Sergio Andreozzi: First thing was that the Open Grid Forum is "really open". My perception had been that starting and co-chairing a working group in OGF would be a difficult and long process. The experience was instead totally different. The proposal was easily accepted and the GLUE WG became official in just a few weeks. Going to OGF also expanded the interest in this activity and now we have more projects supporting this work. During the first year of work I had also fruitful collaborations with other OGF working groups such as the Reference Model and the OGSA WGs. Of course there is a cost to pay for this. Producing a recommendation is a social process which requires more time than making everything on your own. But if we look at the history in other contexts, (e.g., telecommunications, WWW), we understand that this is the main path to realize the vision of what Grid should be and to open to a healthy competition among the various players.

I also learned that becoming an active participant in OGF eases interactions with other working groups and provides much more opportunity to exchange ideas and receive valuable suggestions.

GridConnections: What are your future plans for the recommendation?

Sergio Andreozzi: Our goal is to produce and present a mature specification at OGF22. This includes main entities (e.g.: administrative/user domains, service), computing entities (to model complex computing resources as clusters or supercomputers) and storage entities. The months following OGF22 will be dedicated to make it a proposed recommendation with available open source implementations that can be adopted by the Grid community.

For more information, download the GLUE 2.0 Specification or feel free to contact one of the GLUE working group chairs: Sergio Andreozzi, Laurence Field, Balazs Konya

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Special Insert – OGF22 Session Previews
The leaders of the following sessions wish to invite all interested OGF22 attendees to come to their sessions to learn, participate and meet their fellow colleagues!

Cloud Systems BoF
Wednesday 2/27 at 2:00 PM in the Cambridge Room
There will be a Birds of a Feather session at OGF22 on "Cloud Systems" that aims to set scene and review options for OGF activities in this area. It follows a keynote by Irving Wladawsky-Berger of IBM on "Cloud Computing, Grids and the upcoming Cambrian Explosion in IT". Anyone interested in either presenting or participating in a panel at this BOF should contact gcf@indiana.edu so we can plan the session.

HPC Profile Working Group
Tuesday 2/26 at 11:15 AM in the Cambridge Room
The HPC Profile WG recently produced the "Interoperability Experiences with the High Performance Computing Basic Profile (HPCBP), Version 1.0", which is an OGF document currently in public comment. At OGF22, we will focus our efforts beyond this "Basic Profile" into two specific areas: a File Staging Extension (for moving files into and/or out of a HPC Basic Profile-compliant service) and the "Advanced Filter Extension" (for dynamically querying HPC Basic Profile-compliant services for information that might be relevant to the client). We encourage everyone to attend to contribute requirements, feedback, and general opinions to ensure success of the HPC Profile WG!

JSDL Working Group
Monday 2/25 at 11:15 AM in the William Dawes Room
The JSDL-WG has produced a language that describes the requirements of jobs (or activities) for submission to Grids. Work continues on improving and extending the language to a wider class of activities, including Web service invocations, parallel Job execution, and more complicated submission patterns such as parameter sweep submissions. The group is also resolving issues raised by the Grid community. At OGF22, the group will discuss ongoing work on defining parameter sweep jobs and new work on representing all information about an activity---not just its submission requirements---over the activity's entire lifetime.

GLUE Working Group
Wednesday 2/27 at 9:00 AM and 3:45 PM in the William Dawes Room
Thursday 2/28 at 10:45 AM in the Crispus Attucks Room
The GLUE Working Group is converging towards a stable version of the GLUE Information Model specification. During OGF 22, the status of the model and the reference implementations will be discussed. If you are interested in GLUE adoption, take the opportunity to participate in the session and get engaged in order to early adopt the upcoming standard and to provide feedback so that your specific scenarios are fully supported by the specification.

Remote Instrumentation Services in Grid Environment - use cases
Wednesday 2/27 at 9:00 AM in the Thomas Paine Room
The RISGE-RG main purpose is to integrate approaches in defining remote access interfaces to sophisticated laboratory equipment in e-Infrastructure environments. This concerns steering, monitoring and user access to unique instruments. The RISGE explore issues related to the usage of advanced Grid capabilities such as interactivity, visualisation in the process of monitoring as well as execution of measurement tasks and experiments on complex remote scientific equipment. This session is a continuation of the discussion and work started during first RISGE-RG group session at OGF21 in Seattle. During this session the group will discuss the first collected use cases and present best practices. If you are interested in remote instrumentation, interactivity, steering and visualisation in grids - don't miss that session.

GSM Working Group Sessions
Wednesday 2/27 at 9:00 AM, 10:45 AM, and 11:30 AM in the Molly Pitcher Room
Would it not be nice if every storage system could be accessed from the Grid? From a single disk server to multi-petabyte tape robots, a common interface to storage systems must deliver interoperation and flexibility. The Grid Storage Management working group (GSM-WG) is the standards group for the Storage Resource Manager (SRM) protocol which provides a common control interface to Grid storage elements. Across the Large Hadron Collider Computing Grid, about 200 storage elements run SRM version one and over 50 version two. With at least seven different interoperating implementations, the protocol is now a widely used and well established standard.

OMII-Europe: Using open standards to deliver interoperability
Monday 2/25 at 11:15 AM in the Molly Pitcher Room
OGF standards play a crucial role in the work done by the OMII-Europe project. This EU-funded project is tasked with delivering a set of interoperable components that can work across three Grid middleware platforms: gLite, Globus and UNICORE. OMII-Europe has have identified five key components and are re-engineering them using open standards. These components enable Grid users to overcome boundaries between Grid infrastructures and harness the power of more resources. This presentation will describe these components and how the OGF standards have helped achieve interoperability. Moreover, a real use case will be explored in which this software is not only beneficial, but necessary. This will be complemented by a live demo on Monday (25th) evening

which will show how the combined use of the OMII-Europe components helps e-scientists.

DAIS Working Group

Wednesday 2/27 at 3:45 in the Thomas Paine Room

The DAIS WG is defining service-based access to data sources. It has already defined specifications for relational/XML resources. The group is now extending this framework for Resource Description Framework (RDF) based data, which is of importance with the proliferation of semantic web technologies. The proposed RDF specifications define two classes of access: one for managing RDF(S) data using ontology handling primitives; and another based on the SPARQL query language for RDF. At OGF22, we will report on progress on specifications, including a new Glossary of Terms and use cases which show the usage of Semantic Web technologies in the Grid.

OGSA Data Movement Interface (DMI) Working Group

Monday 2/25 at 1:45 PM in the Thomas Paine room

The OGSA Data Movement Interface (DMI) Working Group is very close to its final goal of producing a specification that provides a service orientated framework for initiating and managing the movement of data from a user specified source and sink. The service infrastructure will then manage the transfer which could be scheduled and pick a suitable protocol to do this with. By OGF22, we hope to have taken the spec to public comment so if you want to know more or want to comment on what has been produced then please come to the OGSA-DMI session.

Scaling DRMAA codes to the Grid: A Demonstration on EGEE, TeraGrid and OSG

Tuesday 2/26 at 3:30 PM in the Molly Pitcher Room

The session describes the DRMAA language bindings and the support for interoperability provided by the GridWay Metascheduler. GridWay DRMAA implementation allows applications intended for clusters to scale to grid environments. As use case, we will demonstrate a widely used Bioinformatics application, CD-HIT, running on the EGEE, TeraGrid and OSG Infrastructures.

Porting Applications with Globus GridWay

Wednesday 2/27 at 10:45 AM in the Cambridge Room

GridWay is a widely-used metascheduling technology that performs job execution management and resource brokering on heterogeneous and dynamic Globus Grids. The session provides an overview of the process of installing, configuring and using GridWay, focusing on the development of applications using the C and JAVA bindings of the DRMAA OGF recommendation, which assures its compatibility with other management systems that implements the standard, such as SGE, Condor, Torque

The Preservation Environments Research Group (PERG)

Tuesday 2/26 at 3:30 PM in the Thomas Paine Room

This session will explore the implications of the use of Rule-Oriented Data Systems for the enforcement of preservation policies. Multiple international efforts are investigating the enforcement and validation of Trustworthy Digital Repository Assessment criteria. The projects include the NARA/SDSC

Transcontinental Persistent Archive Prototype, the EU SHAMAN project - Sustaining Heritage Access through Multivalent Archiving, and the EU CASPAR project - Cultural, Artistic and Scientific knowledge for Preservation, Access and Retrieval. We will discuss the choice of management policies that should be enforced by the preservation environment, and demonstrate how related policies can be implemented as rules within the iRODS data grid software.

OGF Marketing
Monday, 2/25 at 9:30 AM in the Cambridge Room
The Marketing function of OGF has three main co-equal goals:
- Marketing OGF as the go-to organization for information and engagement in standards development and the promotion of grids.
- Marketing Grid as a key enabler for the 21st century knowledge economy.
- Marketing and promoting the adoption of the standards developed by OGF.
 Please join us as we go through a structured exercise to develop a plan to accomplish our marketing goals within the context of our resource constraints. We need your expertise if you are in marketing or if you are an OGF standards developer or someone working to build a users' community so we can gain a clear understanding of your needs.

OGF22 Program Updates
Keynotes
Charlie Catlett - What OGF Can Do for Enterprises (A View from the CIO Office)
Tuesday at 8:30 AM
OGF and its predecessors have evolved over the past several years in terms of both who are the customers and how many customer communities can be effectively served. Catlett will speak about the needs of three communities from a first-hand perspective: scientists and engineers using distributed infrastructure, multi-institutional grid service providers, and large campus (university or laboratory) service providers. These requirements, and most importantly their intersection, provide a rich set of areas for OGF to contribute to information technology today. The term "Grid" is rarely precisely defined among these communities, but the purpose of OGF - and its opportunities to impact information technology - transcends terminology. Even when it comes to OGF's middle name.

Irving Wladawsky-Berger - Cloud Computing, Grids and the upcoming Cambrian Explosion in IT
Wednesday 2/27 at 1:15 PM

Addison Snell - Grid Usage and Productivity in HPC
Thursday 2/28 at 8:30 AM
Drawing from recently completed studies, Snell will project the future of grid technologies as they pertain to overall organizational productivity, according to user-driven metrics. As part of this analysis, Snell will demonstrate areas in which grid computing and collaboration environment can improve HPC workflows, using a newly developed productivity analysis methodology.

BoFs
The Cloud Systems BoF has been expanded to 2 sessions and moved to Wednesday afternoon starting at 2:00 PM.

Registration and Housing
The deadline for Full Registration and hotel reservations is **Friday, February 8**. After this date, registration fees will increase to the 'On-Site' rates and hotel reservations under OGF's discounted rate ($129) will only be issued based on availability. Register now to take advantage of these discounted rates!

Sponsorships Available!
Sponsorship opportunities for OGF22 include Display Tables, Welcome Reception, Chair Appreciation Night, OGF Co-branded Promotional Item, Wireless, and Meal Functions (Lunches and Breaks)., By sponsoring OGF22, your organization will gain greater visibility and recognition as a Grid thought leader in our global community. This will be our only OGF event in the USA for all of 2008, so please strongly consider sponsoring if you are interested in reaching this audience. The sponsorship prospectus provides additional information.

Welcome New Organizational Members

OGF welcome's our newest organizational members MIMOS (Gold) and Sybase (Silver)!
MIMOS
MIMOS is a strategic agency under the Ministry of Science, Technology & Innovation of Malaysia. MIMOS pursues exploratory and industry-driven applied research through multi-stakeholder smart partnerships with universities, research institutes, Government and industries with a focus on frontier technologies. MIMOS' applied research areas, based on real-world trends, are cyberspace security, encryption systems, grid computing, communication technologies, MEMS/NEMS, advanced informatics, knowledge technology and micro energy.

A MIMOS initiative, KnowledgeGRID Malaysia, is aimed at providing a national infrastructure that maximizes high performance computing resources to accelerate research and industrial development for national wealth and value creation. "The grid will be the next Knowledge infrastructure for the nation that will increase Malaysia's competitiveness in technology advancement regionally and globally," said MIMOS President & Chief Executive Officer, Dato' Abdul Wahab Abdullah. KnowledgeGRID Malaysia will provide computing resources and data capabilities to the nation's weather modeling, earthquake simulation and protein folding, DNA, and drug design research. This will accelerate Malaysia's advancement in biotechnology, forecasting of natural disasters and animation content initiatives at significantly lower costs.

The development of KnowledgeGRID Malaysia is being undertaken in three phases. Phase One, was focused on the development of grid framework based on Service Oriented Architecture (SOA) consisting middleware, grid applications and security as well as establishing research collaborations with local universities. Phase Two, which began in 2008, involves enhancing further the Knowledge Grid Infrastructure and increasing research collaborations with local and foreign research institutions, and local industries; while the final Phase will involve rolling out the KnowledgeGRID Malaysia nationwide.

Sybase
For more than 20 years, Sybase has been a leader in developing and expanding innovative database technology from high performance transaction processing to complex webs and grids of distributed data worldwide. Since our founding in 1984, we have earned the trust of many of the world's leading companies for our ability to manage information and deliver unsurpassed levels of data reliability and security. Today, Sybase is the largest enterprise software and services company exclusively focused on managing and mobilizing information. With our global solutions, enterprises can extend their information securely and make it useful for people anywhere using any device.

Call For Submissions for OGF Special Journal Issue

Submissions are being sought for the Special Journal Issue of Concurrency and Computation: Practice and Experience for the Open Grid Forum. The deadline to submit is March 15.

Improved OGF Website Launched

In conjunction with the launch of the thought leadership series, we have also refreshed the OGF home page in order to better highlight the key areas of value that we deliver to the industry, including our document series, events, and breaking news. Included in this effort is a new set of pages to showcase the valuable content our attendees produce for each OGF event. We hope you like the new look and find it easier to use!

Documents Update

Documents in Public Comment

Prior to formally publishing a document, OGF solicits "public comments" from the greater grid community, which is an important step in the OGF document process. The following documents are currently available for public comment. Please take a moment to provide your feedback.

- Distributed Resource Management Application API 1.0 - IDL Specification
- Interoperability Experiences with the High Performance Computing Basic Profile (HPCBP), Version 1.0
- Configuration Description, Deployment and Lifecycle Management Working Group (CDDLM-WG) Final Report
- Job Submission Description Language (JSDL) Specification, Version 1.0 (Errata draft 020)
- Secure Addressing Profile 1.0
- Secure Communication Profile 1.0

Upcoming Events

- **OGF22 Cambridge, Massachusetts February 25-29, 2008**
- **OGF23 Co-located with the BEinGRID Industry Event   Barcelona, Spain June 2-6, 2008**
- **OGF24 Co-located with GridAsia08 Singapore September 15-19, 2008**

Other Events

- **INGRID 2008 Lacco Ameno, Island of Ischia, Italy April 9-11, 2008**
  3rd International Workshop on Distributed Cooperative Laboratories:
  Instrumenting the Grid

Newsletter Contributors Needed

The purpose of the OGF GridConnections newsletter is to inform and educate the greater grid community about our activities and accomplishments. If you have any news you would like to submit for the newsletter, please do not hesitate to do so. You, our members, drive all of the significant events, activities and accomplishments of our community and we would love to hear from you. Just send an email to the GridConnections editor. We welcome your input!

Please Renew your OGF Membership For 2008

Please remember to renew your 2008 OGF membership. We made great progress in 2007 and we need your continued support to build on that momentum. We also ask all organizations that are in the Grid community who are not currently members to join us in 2008. Memberships start for as little as $10,000 ($5,000 for eligible non-profits). You may contact Steve Crumb or visit the membership portion of our website for more information. Thanks!