Minutes
MAGIC Meeting
April 7, 2010, 2:00-4:00

Action Items

1. Please provide your user experiences with collaboration capabilities to Don Stewart at: dons@galois.com

2. Mike Nelson will forward to MAGIC information on The Crowd and the Cloud meeting at Georgetown

Proceedings

This meeting of MAGIC was chaired by Susan Turnbull of DOE.

Future Grid: Gregor von Leszewski

The purpose of Future Grid is to build a simulation environment to provide a testbed for middleware and applications. It is not a production cloud but a testbed to support research, development, and early use of new technologies at all levels of the software stack. Future Grid is a part of the TeraGrid and mimics TeraGrid and other parallel or distributed systems. It provides a collaborative environment for science applications and related software. It is a small (5600 core) science cloud that provides a virtual machine based simulation environment. It also has over 550 TB of storage.

Future Grid sites are located at Un of Chicago, Purdue Un., Indiana Un., UCSD, TACC (AUSTIN), and Un. of Florida. It also has connectivity to GEANT and its associated European Grids. Other participants include the NSF, TeraGrid, commercial partners, OGF, Open Nebula, Open Cirrus Testbed, and others.

Users of Future Grid include developers of new applications in cloud and Grid environments, developers who want to experiment with multiple hardware environments, networking researchers testing networks to support Grid and cloud applications, and education users.

Future Grid Committees include:

- Systems Administration and Network Management
- Software Adaptation, Implementation, Hardening, and Maintenance
- Performance analysis
- Training, Education, and outreach Services
- User Support
- Operations and Change Management

Future Grid architecture is open to configure resources based on images. Modular design enables different clouds and images to be implemented on the hardware. It supports important middleware including TeraGrid stack, Condor, BOINC, gLite, Unicore, and Genesis II. Development phases include Phase 0: get the hardware to run; Phase 1: get early users on the system; Phase 2: Implement dynamic provisioning; Phase 4: Integrate with TeraGrid. Dynamic provisioning changes the underlying system to support current

user demands including elements of Linux, Windows, Xen, Nimbus, Eucalyptus, Hadoop, and Dryad. xCAT and Moab provide the underlying structure of Future Grid to install the testbed elements and schedule resources.

Future Grid is currently looking for early adopters. Milestones indicate hardware available to users in May 2010.

For the full briefing please see:
http://www.nitrd.gov/Subcommittee/lsn/magic/MagicMeetingDetail.aspx

Open ID

Open ID provides digital rights management. The Earth Systems Grid (ESG) does not have a toolkit for adapting Open ID. The American Policy Forum has a group on authentication methods that is discussing Open ID. Alan Sill participates in this group.

OSG: Dean Williams

OSG is preparing for CMIP5 data. They are releasing the ESG software to the community shortly by opening it up to friendly users. They will be testing the system for robustness. The U.S. is cooperating with Europe and Australia to start up the ESG. The official release is at the end of April 2010.

CDIGS: Steve Tuelke

CDIGS released Globus 5.0.1 updates. CDIGS is now focused on native packaging

CEDS: Steve Tuelke

CEDS is a Globus.org service, working with users. They are currently working to implement perfSONAR services and other network management capabilities. Integrations of Condor with Globus.org are using Globus to stage systems.

TeraGrid: Dan Katz

TeraGrid is incorporating Globus 5. TeraGrid is in its last year of operation. Some resources are being retired and TeraGrid is working with users to transition their systems to other capabilities. TeraGrid has initiated a new system online with 1500 cores and 8 TB of memory. They received a request for 200 cores next month.

OSG: No update
Shibboleth: No report

Magellan:

Argonne held a “Welcome to Magellan” day. They held a hands-on session on access to the Magellan cluster. Eucalyptus software bugs are causing a slowdown.

SuraGrid

SuraGrid is implementing new authentication capabilities. They are working with Jim Basney on hardware ID tokens as part of new authentication capabilities. SuraGrid is invested in AIX. OSG does not support that platform.

Net Neutrality: Mike Nelson

The courts made a groundbreaking decision on net neutrality. Comcast was contesting with the FCC that the FCC did not have the authority to impose net neutrality. The FCC lost. Congress could weigh in with new legislation to allow the FCC to impose net neutrality but that would take time and would be a very political decision. Broadband wireless may offer an alternative service in the future but is not currently capable of providing the needed services.

BIRN: Liming Yang

Bioinformatics Information Research Network (BIRN) PI is Carl Kesselman. It is a collaboration among USC, UCLA, UC Irvine, MGH Hospital in Boston, and others. It provides network access to Bioinformatics information.

Don Stewart discussion of DOE Grid

Don Stewart is PI on a DOE project to investigate collaboration and sharing on the Grid. It is identifying goals and lessons learned. The objective is to bring Web 2.0, tools, WIKI, and other Web services to researchers running data systems and distributed services to enable new forms of collaboration. They are developing new architectures to run on the Grid including Web applications with tagging, sharing, and management. It is built on top of IRODS and is exploring sue of tools. Lessons learned identifies needed features. IRODS has a simple user identification and authorization from any node, ideally like Open ID. For programmable hooks you can add custom code which enables easier adaptation. WebDAV makes it easy to adapt Web tools. Identity management, authentication and authorization, is needed for Web access to storage. Tools to implement these capabilities are required. There are emerging tools fro group identity. Well documented Open Source codes really help.
Many users are not adopting new collaboration tools, such as software as a service. Time to set up and a lack of familiarity for how to adapt tools to your application remain big barriers to adoption of collaboration services.
The road forward is to provide open tools and open access.
Their report on collaboration and sharing the Grid is due out soon.

AI: Please provide your user experiences with collaboration capabilities to Don Stewart at: dons@galois.com

Meetings

April 20: Georgetown Un., The Crowd and the Cloud

AI: Mike Nelson will forward to MAGIC information on The Crowd and the Cloud meeting at Georgetown

May 21: NIH BIRN User Group meeting at NIH to discuss Grid-based software infrastructure. POC: Liming Yang Lyang@mail.nih.gov

July 7-8, Crystal City: perfSONAR workshop supported by NSF and DOE and implemented by Internet2.

Next MAGIC Meetings
May 5, 2:00-4:00, NSF
June 2, 2:00-4:00, NSF