Minutes
MAGIC Meeting
December 3, 2008, 2:00-4:00
NSF, Room 1150

Attendance:

Linda Akli	SURA	akli@sura.org
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Kent Blackburn	LIGO	kent@ligo.caltech.edu
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David Martin	IBM	martinde@us.ibm.com
Don Middleton	UCAR	don@ucar.edu
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Don Petravick	DOE/HEP	Don.Petravick@science.doe.gov
Ruth Podres	FNAL	ruth@fnal.gov
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Susan Turnbull	DOE/SC	susan.turnbull@ascr.doe.gov
Dean Williams	LBL/ESG	

Field Code Changed

Action Items

1.: If you have a Statement of Understanding on policies for sharing and accessing data internationally and in the U.S., please share it with Dean Williams of the ESG.

2. Dean Williams will send the MAGIC team pointers to descriptions of ESG nodes and gateways

3. Susan Turnbull will send MAGIC the URL for IRODS

4. Dean Williams will inform Jennifer Schopf about requirements for international exchanges of data for ESG so these requirements can be considered in the next round of proposals for the NSF, IRNC awards.

5. Ravi Duri will discuss Nimbus at the February 4 MAGIC meeting. Ravi and Katie will talk about cloud implementations in general.

6. Grant Miller will send the MAGIC email list a copy of the JET white paper on Fostering Performance Measurement.

7. If you have an interest in participating in the MAGIC team to discus distributed, cloud, and Grid computing, please contact Grant Miller (miller@nitrd.gov) or Frederica Darema (fdarema@nsf.gov)

Proceedings
This meeting of MAGIC was chaired by Susan Turnbull of DOE and Jennifer Schopf of the NSF.

Earth System Grid: presentation by Dean Williams
The Co-PIs for the Earth System Grid (ESG) are Dean Williams and Don Middleton. The ESG is moving to a federated architecture to provide a framework for international cooperation and to produce the information and products for the next meeting of the Intergovernmental Panel on Climate Change (IPCC). A testbed is in-place.
The ESG gateway is a broker to handle data requests for a specific community; one community is the IPCC. Other communities include the CCSM (Community Climate System Model), North American Regional Climate Assessment Program, and others. The gateway provides services, including a user interface, visualization tools, and orchestration of workflows. The three ESG gateways are located at NCAR, Oak Ridge, and PCMDI. ESG is currently working with Great Britain and Germany to federate with their software. ESG is also working with NASA which is an ESG node but they plan to upgrade to become an ESG gateway.
ESG data nodes are the locations of data. There are many international ESG nodes including nodes in China, Japan, and Europe. Each site publishes data within their own site and they produce metadata for this data that is harvested at the gateway. Executed data product requests can include calculation of data, publishing data, and serving up data to the ESG gateway. Users are enabled to surf the site, browse to find data, and to harvest data at that gateway. A user can submit a request to harvest data at more than one gateway.
BeSTMan is the Berkeley storage manager.
ESG nodes connect to a gateway but nodes do not connect to nodes. Several nodes can attach to a gateway. Gateways are the peer-to-peer sites. There are a limited number of gateways internationally. The data nodes use existing and legacy technology which provides a lot of commonality and interoperability across nodes and data sets. ESG is currently writing a Statement of Understanding (SoU) for a policy to share and access data. ESG welcomes guidance on SoUs for Virtual Organizations (VOs).

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ESG is using Open ID which is used extensively internationally. ESG and the British Atmospheric Data Center are using Open ID and sharing data and services under a federation experiment. ESG is using X.509 consistent with Grid FTP. ESG will issue tokens for some cooperations.

About 500 papers have been published over the last 2 years based on ESG data. A lot more are expected in support of the next round of support to the IPCC.

There are concerns about the networking to support the ESG. About 600 Terabytes of data have been delivered so far. ESG is trying to reduce the amount of data transported over the networks by enabling local processing of data to produce requested data products that constitute less data to be transferred. Oak Ridge and Lawrence Livermore have high speed network is in-place. They need to do testing for performance and functionality. The LHC cooperation performed a partial dress rehearsal for transport and sharing of data. This might be a useful paradigm for the ESG.

Another climate grid is being cooperatively developed with China. There is an IRNC agreement with China that might expedite cooperation. The Gloriad network supports Chinese Academy of Sciences data flows to NCAR. There are large data flows through this cooperation.

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The next IRNC call will require PerfSONAR deployment.

There will be a February workshop with Rich Carlson to organize a workshop on performance measurement, the deployment of standard performance measurement tools suites, and agreements for sharing of performance data.

Other international data cooperations exist. WGCM collect data and under its purview 23 modeling groups meet twice a year to discuss data, networks, formats, and policy issues for cooperation.

The ESG intends to function as a science gateway on TeraGrid.

Security across domains is a critical issue. Nimbus work is integrated into a security framework. Nimbus cloud implementations will support security

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CEDPS

CEDPS has tools to facilitate merging GridFTP with PerfSONAR to enable bulk data transfers. NetLogger has also been deployed. Globus 4.2 has also merged GridFTP with NetLogger.

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CEDPS is working with David Skinner of LBL on legacy applications by providing tools to them and looking for further applications. ORNL is providing a similar capability for CNS. The Advanced Neutron Source at Argonne Labs is working with them.

CDIGS

CDIGS has ongoing work with applications using the Globus tools. Globus 4.2.1 was released last week. Tomorrow CDIGS has a meeting on its incubator project to encourage new users and applications to use Globus. CDIGS is scheduling their next Advisory Committee Meeting.

OSG

OSG is working to enhance the reliability of its tools and capabilities.

SURAGrid: Linda Ackley

SURAGrid is a Globus-based Grid. It now has 34 members. They are starting a project with Microsoft as a testbed for classes of users and institutions. This will provide a gateway to the larger SURAGrid.

MAGIC Discussion Group on Clouds and Distributed Computing

Frederica Darema is starting a group to discuss definitions, distinctions between, and uses for distributed computing, cloud computing and Grids.

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Workshop on the Science of Science Policy

The federal agencies have been working on developing a research roadmap for the Science of Science Policy. A workshop is being held today and tomorrow at GWU to discuss priorities and the way forward. A follow-on workshop will be held December 17 at the National Science Foundation

Meetings of General Interest

December 3, Miron Livny will talk about the OSG at the NSF March 2-5: OSG all hands meeting. If you have an interest, please contact Kent Blackburn at LIGO

Next MAGIC Meetings

January 7, 2:00-3:30, NSF, Room 1150
February 4, 2:00-3:30, NSF, Room 1150