

Minutes
MAGIC Meeting
February 4, 2009, 2:00-4:00
NSF, Room 1150

Attendance:

Doug Baggett	NSF	dbaggett@nsf.gov
Bob Bohn	NCO	bohn@nitrd.gov
Lisa Childers	ANL	childers@mcs.anl.gov
Frederica Darema	NSF	fdarema@nsf.gov
Dan Gunther	Berkeley	
Keith Jackson	Berkeley	
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Miron Livny	UWisc	miron@cs.wisc.edu
Ravi Madduri	ANL	Madduri@mcs.anl.gov
David Martin	IBM	martinde@us.ibm.com
Mike Nelson	GU	mnelson@pobox.com
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Don Petravick	DOE/HEP	Don.Petravick@science.doe.gov
Ruth Podres	FNAL	ruth@fnal.gov
Susan Turnbull	DOE/SC	susan.turnbull@ascr.doe.gov

Action Items

Proceedings

This meeting of MAGIC was chaired by Susan Turnbull of DOE

Cloud Computing with Nimbus: By Kate Keahy

Full presentation is at: http://colab.cim3.net/cgi-bin/wiki.pl?ExpeditionWorkshop/LeveragingServiceOrientedArchitecture_AdvancingCyberinfrastructureCapabilities_2009_02_09#nid41GO

Nimbus goals are to:

- Make it easy to experiment with cloud computing
- Evolve software to meet scientific project needs
- Provide a laboratory for exploration of cloud interoperability issues.

Nimbus provides a toolkit to support computing on-demand. Software, infrastructure and a platform are provided as services. A workspace is constructed providing an environment and resources. Implementations are supported through leasing hardware platforms, reimaging, configuration management, and dynamic accounts in a virtual environment.

Nimbus is Open Source and provides a platform for experimentation with interoperability. It establishes a private cloud and a workspace, end-to-end services and a broker/gateway. Users can interact directly with the workspace, just as if it were a physical machine. It uses a Web Service Resource Framework (WSRF). GSI authentication and authorization use PKI credentials. It works with Grid proxies, VOMS, Shibolet (GridShib), and custom PDPs. It can be

deployed over public IPs, private IPs and internal networks. Each VM can specify multiple NICs so private and public networks can be mixed.

The Nimbus workspace provides a resource manager. Each node must have a VMM and workspace control installed. The clusters share trust and security and configuration and context information. The cluster enables reciprocal exchange of information in a networking and security environment. The context broker can work across multiple cloud providers in a distributed environment.

The latest version of Nimbus was released last month (Jan 09) Version 2.2. It is being used to conceptualize hundreds of nodes for EC2, HEP STAR runs and other applications.

Nimbus resources include:

- University of Chicago: 16 nodes
- Un. Of Florida: 16-32 nodes
- Masaryk Un. Czech
- Other installations in progress include IU, Grid5K, Vrije

For information on Nimbus see: <http://workspace.globus.org/clouds>

Discussion identified that payment for the resources used can be managed through an account. Users are authorized on the basis of their account credits. The environment that is established must be consistent between runs. Most communities of users already have a process for building and verifying their environments. Methods exist for image conversions (VMware → ZEN).

Meetings of Interest

February 24-26: The NCO is holding a Strategic Planning Workshop February 24-26 at the U.S. Mint

March 11: NITRD Subcommittee meeting at NIST

Next MAGIC Meetings

March 4, 2:00-3:30, NSF, Room 1160

April 1, 2:00-3:30, NSF, Room 1150