

FutureGrid

Quarterly Report – Q3 2011 – 1 April to 30 June 2011

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Introduction

This quarterly report is the summary document, which utilized the following bi-weekly reports:

April 18, 2011

May 02, 2011

May 16, 2011

May 30, 2011

June 13, 2011

June 27, 2011

The organization of this report follows our biweekly reports:

- New Projects This Quarter
- Systems Administration and Network Management
- Software
- Training, Education, and Outreach
- User Support
- Operations and Change Management (including Expenditures Report)

New Projects This Quarter

New projects submitted during the April-June (PY2 Q3) timeframe, including keyword classifications:

Title	Institution	Keywords
HBase Application and Investigation	Indiana University, School of Informatics and Computing	Hadoop, HBase, Non-relational database indexing
Optimizing Scientific Workflows on Clouds	University of Southern California, Information Sciences Institute	workflow, cloud computing
Google SOC 11: Using DemoGrid and Globus Online on FutureGrid	Indiana University, Community Grids Laboratory	grid, cloud, eucalyptus, nimbus, globus
De novo assembly of genomes and metagenomes from next generation sequencing data	Indiana University, School of Informatics and Computing	Fragment assembly, metagenomics, bioinformatics
Fresno System Architecture and Cloud Computing Class	California State University, Fresno, Computer Science	system programming, system architecture, cloud computing
Research Experience for Undergraduate Students in Cloud Computing	University of Arkansas, High Performance Computing Center	REU
The VIEW Project	Wayne State University, Department of Computer Science	Scientific workflow, Cloud computing.
CSULA Business Intelligence on Map/Reduce	California State University Los Angeles, CIS department	Market Basket Analysis, Customer Analysis, Data Mining, Business Intelligence, MapReduce,
Cloud computing class	University of Piemonte Orientale, Computer Science Department	class, teaching, comparison of different cloud middlewares
Tutorial: CCGrid2011	Indiana University, Community Grids Laboratory	tutorial, future grid, nimbus, eucalyptus, hpc
Elastic Computing	University of Colorado at Boulder, Computer Science	elastic computing, cloud computing, infrastructure-as-a-service
Workshop: A Cloud View on Computing	PTI, Indiana University	outreach, cloud computing
Keyword-based Semantic Association Discovery	Indiana University, Computer science	Keyword, Semantic Association, MapReduce, Parallel
Hierarchical Multidimensional Scaling process Massive Metageonomics data	Indiana University, Pervasive Technology Institute	pairwise clustering, multidimensional scaling, Needleman-wunch, Smith-waterman
Testing new paradigms for biomolecular simulation	University of Virginia, Departments of Molecular Physiology and of Biomedical Engineering	molecular dynamics, Markov State Model, gromacs, protein folding
Collaborative Data Distribution and VM Provisioning	University of Florida, Advanced Computing and Information Systems Laboratory	P2P, BitTorrent, Cloud, Provisioning
HPC Scheduling	UCSD, SDSC	Catalina GUR MCP metascheduling python
Cloud Computing Research at UC Riverside	University of California, Riverside, Department of Computer Science and Engineering	cloud computing, application development, application deployment
End-to-end Optimization of Data Transfer Throughput over Wide-area High-speed Networks	University at Buffalo, Computer Science and Engineering	End-to-end throughput optimization, TCP, GridFTP, parallel streams, buffer size, disk striping, CPU striping, Stork, data scheduling.
University of California (UC) Grid and Cloud Project	UCLA, ATS	UC, Grid, Cloud

Systems Administration & Network Management

Compute and Storage Systems

IU Cray XT5m (“xray”)

- System operational for production users
- An additional service I/O node is necessary to add dynamic shared library support and external Lustre file system capability
- Outages:
 - Cray has issued a field notice for memory DIMMs. New memory arrived to replace a batch of 24 faulty DIMMs
 - A 4-hour unplanned outage on 6/6 due to a Seastart networking component failure. System dump sent to Cray for analysis
 -

IU iDataPlex (“india”)

- System operational for production users
- Red Hat Enterprise Linux (RHEL6) being tested for future use on FutureGrid
- Transition to new *home* directories working well
- More IP addresses allocated for virtual machines
- Outages:
 - Eucalyptus services required a restart on 6/3 due to the management node becoming unresponsive
 - Internal network problems inside the cluster affecting HPC and Eucalyptus services for 2 hours.
 - Internal network problems occurred on 06/14 that required a reboot of the system. HPC and Eucalyptus services were unavailable for 2 hours

IU HP (“bravo”)

- *Bravo* is a cluster of 16 large memory (192GB) and large local storage (12TB) and will be integrated into the FutureGrid environment
- Networking for *bravo* cluster has been configured

UC iDataPlex (“hotel”)

- System operational for productions users
- Administrators have been building cbench to test cluster performance/stability
- Modules files are being updated to make the Linux cluster environment more similar to the Cray Linux Environment, to make it easier for users to select the correct MPI software and math libraries
- Outages:

- After a planned power maintenance, GPFS took longer to start than expected
- A planned network maintenance from QWEST in Chicago caused GPFS, Nimbus, and HPC services to go offline for 3 ½ hours

UF iDataPlex (“foxtrot”)

- System operational for production users
- Outages:
 - UF was unavailable for 1.75 hours due to a local network issue on campus believed to be “spanning tree” related

SDSC iDataPlex (“sierra”)

- System operational for production users
- Outages:
 - A failed disk was replaced, with no downtime required

TACC Dell (“alamo”)

- System operational on HPC environment for production users
- Genesis II is now running on a dedicated host with 300+ GB of shared and local storage for the software. Jobs can be submitted thru Genesis.
- The NFS server is now served from the Infiniband fabric
- Updated Dell utility *syscfg* on compute nodes, which adds some BIOS configuration functionality and reporting
- Outages:
 - The OFED stack was rebuilt to fix the issue with mlx4 driver and XRC; all computer nodes were updated
 - Intermittent network issue on 5/24; network route moved to different switch
 - The move of NFS to IB experienced issues and was moved back to Ethernet while more tuning is done. Performance was very good but network stability was not. This resulted in a 24-hour outage on 5/26-5/27.

Networks

- Networking is in a fully operational state.
- IU network engineers from the Global Research Network Operations Center (GRNOC) have been consulting with the XD networking lead and National Lambda Rail (NLR) to determine the best way to connect FutureGrid to the XD network.
- The FutureGrid central router will remain in the Starlight facility in Chicago, the move to the Level3 facility at 111 North Canal was determined to be cost prohibitive. The migration of FutureGrid's peer connection from TG to XSEDE is scheduled for July 7th from 12:01 AM – 6:00 AM. The 10Gb circuit to peer with XSEDE will be shared with the connection to UF so no new circuit costs will be incurred.
- The Spirent Network Impairment Device (NID) was reinstalled at Starlight in Chicago.
- Outages:
 - 06/07. A 2-hour network outage of FutureGrid's primary commodity connection occurred due to an HVAC problem at Starlight that affected FutureGrid core equipment.
- The Network status & calendar pages are live from the GlobalNOC
 - http://atlas.grnoc.iu.edu/atlas.cgi?map_name=FutureGrid
 - <http://noc.futuregrid.org/futuregrid/support/operations-calendar3.html>

Software

Experiment Management

Pegasus:

Provisioned a small number of FG resource from *india* and *sierra* (Eucalyptus), and *alamo* (Nimbus) to run workflows testing recent Pegasus code changes. Each workflow instantiated a different configuration permutation from a limited set of options. With the help of FG resources, all workflows could be run in parallel.

Created the first Nimbus-based Provisioning Workflow. A workflow that is capable to provision and de-provision resources, while running the user application workflow in the newly provisioned resources, is at the heart of Experiment Management.

Extended the monitoring tools to include system-wide use of file descriptors by file mode, and various Condor-related monitoring data. The monitoring tools should provide better data when repeating the Periodogram experiments.

Continued work on a provisioning workflow that includes provisioning resources, running an application workflow on the provisioned resources, and de-provisioning the resources. Testing various permutations of how application jobs would be executed in order to ensure proper functioning.

Experiment Harness:

An alpha version of a host list management tool has been created and made available on Alamo for testing and feedback. The purpose of this tool is to make it easy for users to discover what hosts are available to them, organize those hosts into groups, and then use a tool such as TakTuk to execute commands on these host groups.

- Available hosts are discovered by querying Torque and Nimbus services on FutureGrid as well as letting users enter them manually.
- Hosts are organized by letting users tag them with strings. A host can have multiple tags. A host list file is generated for each tag.

Image Management:

We worked on improvements to the image repository, which included a prototype version supporting secure sockets.

Dynamic provisioning:

Demonstrated that dynamic provisioning on our minicluster with the newest version of XCAT is working. However we needed to rewrite the software and interface with the internal XCAT database. This way of dealing with images has significantly changed between versions and demonstrated that XCAT is less useful as originally projected at the beginning of the project.

Currently, we can register and provision images using xCAT in the minicluster. However, the dynamic provisioning through MOAB is not fully working. This may be due to the old version of MOAB that we have. We have pointed out that the plan of upgrading the production systems to the newest versions in July would unfortunately halt the software development at this time. Thus we agreed with the systems team on an update of the experimental minicluster. Therefore, the System Team is going to upgrade the minicluster by installing the latest version of all used software (RHEL6, xCAT 2.6 and MOAB 6).

Support Software and Cloud Services

Eucalyptus:

The Eucalyptus installation was changed to use a single cluster controller to experiment with operational limits and determine if a node can be freed up. Monthly maintenance was performed on Tuesday Jun 7th, during which the Eucalyptus cluster and cloud controllers were restarted. We have decided to move back to the two cluster controller model after seeing networking issues with the single cluster controller model. It appears that in the MANAGED-VLAN mode of networking mode the operational limits are between 50-70 instances per cluster controller. Eucalyptus procedures for administration and maintenance were documented on the FutureGrid software wiki for use by systems group. Documents that were added include account approval process, image management and migration. The Eucalyptus administration document was updated to add configuration information and explanation of decisions made.

The public IP space on Eucalyptus was increased to have 252 addresses. The cluster controllers were also given new IPs on the same subnet.

Modified the Eucalyptus registration code to include mandatory registration fields for users that apply for Eucalyptus accounts.

Globus:

IU has started jointly with UC a project as part of Google summer of code to provide a virtualized environment for Globus. IU intends to enhance this project by making sure that this environment can also be used on FG.

Grid Appliance:

The UF team worked on the creation of an OpenStack-compute appliance. OpenStack-compute is an open source cloud middleware designed to provision and manage virtual machines. This effort has been motivated by OpenStack documentation brought to the attention of the team (<http://docs.openstack.org/cactus/openstack-compute/admin/content/openstack-compute-installation-using-virtualbox-vagrant-and-chef.html>) which provides a basis for installation of a stand-alone OpenStack virtual environment from simple high-level recipe – thus, such an appliance could be suitable for interesting development, testing, education and training activities. As described, this approach requires recursive virtualization – i.e., a hypervisor running inside a virtual machine. Initial evaluation was conducted using VirtualBox (which allows recursive virtualization) on a foxtrot node. During the experiments, it has been discovered that VirtualBox is unable to start VMs if the images are stored in an NFS share. Given this problem, and the fact that VirtualBox is not readily available on FutureGrid clusters, alternative solutions are being investigated. The current plan is to create a KVM appliance with OpenStack configured to run QEMU VM instances.

Hadoop/MyHadoop

UCSD deployed its new myHadoop tool to *sierra* and *india*, which makes it easy to run Hadoop as a batch job. MyHadoop was developed and adapted for the need to also start up personalized and modified versions of Hadoop. A tutorial and manual page is available through the user manual.

Inca:

Refinements were made to the look of the new simplified status page view recently added to Inca. This view, shown in the attached screenshot, shows the list of major FutureGrid services and their status. When you mouse over the status icon, it will show the details of the tests used to determine its status and when they last execute.

Revised the Inca reporter that collected information on the current partitioning of a machine (e.g., cores allocated to HPC, Nimbus, Eucalyptus) so that it used information directly from Nimbus and Eucalyptus rather than relying on system administrator modifications to the Note field in the Torque 'pbsnodes' command.

A new Inca test was added to detect bad disks on the Solaris storage machines for Sierra and to notify the storage administrator upon failure.

A new test was deployed to detect when Nimbus' X509 host certificates have less than 14 days left and to send email to help@futuregrid.org.

The Inca reporter to test basic provisioning on both Nimbus and Eucalyptus was improved to use a better method to test external network connectivity on a newly instantiated VM.

Updated to Inca release candidate 2.6. Also, the versions of some cluster management tools (Torque, Moab, xCAT, and Modules) were added to the Inca HPC software page at: <http://inca.futuregrid.org:8080/inca/HTML/rest/HPC/FutureGrid>. This replaces a static page that was being maintained in the FutureGrid Wiki.

Nimbus:

New Nimbus release will include several features requested by FG partners in the Nimbus Infrastructure component (in particular, improvements to VM deployment) as well as the first release of Nimbus Platform cloudint.d, the multi-cloud coordination tool that will facilitate repeatable provisioning of environments for distributed experiments. This will be the first Nimbus release to emphasize the Nimbus Platform component that operates on federated clouds (including Nimbus, Eucalyptus, OpenStack and EC2 clouds).

OpenNebula:

OpenNebula 2.0 was deployed on a test machine for evaluation. Both a user manual and tutorial were written and posted in the FutureGrid Portal.

OpenStack:

The OpenStack Nova controller node was installed on Sierra node s80, with Nova compute nodes on s75, s76 and s77. Glance and ObjectStore were also installed on s80. The VLAN Networking is currently not functional on the install and OpenStack will be opened for friendly users after this issue is resolved

ViNe:

The UF team continued the development of ViNe routing software management interfaces. ViNe management services are being designed and implemented such that configuration of ViNe routers in FutureGrid will be stored in a database and automatically retrieved when ViNe software is started, enabling automatic configuration and operation of overlay networks. The UF team also developed and deployed (on both sierra and foxtrot) a RedHat-style “init.d” script to start nimbus services on boot. Reboot of nodes due to monthly maintenance was making nimbus on FG unavailable.

Continued to test different overlay network parameters to improve the end-to-end TCP performance between VMs deployed on *foxtrot* and *sierra* clusters. An alternate overlay route, using the regular Internet path instead of the dedicated FutureGrid circuit, has been tested. Due to lower round-trip latency, increased TCP end-to-end throughput can be observed.

Genesis II:

Deployed new release of Genesis II that supports the RNS 1.1 spec rather than the older RNS 1.0 specification.

PAPI:

A potential new line of attack on the FG/PAPI front opened up in the form of software for Perfctr-Xen, a framework for the Xen hypervisor that supports higher-level performance profilers. We may want to try it with an initial step to identify a machine on which to install it. It requires patches to Xen and its own version of the perfctr Linux patch.

Work has begun on the timing routines for PAPI-V (PAPI for virtual machines). The success of PAPI-V would replace the different timing interfaces on the different virtual platforms with a uniform performance interface that FG users would find deployed ubiquitously.

SAGA:

Saga has been made available on FG: <http://saga.cct.lsu.edu/documentation/deployments>

Other Software Efforts:

University of Virginia. One of our projects is to use the XCG (Cross campus Grid) to bridge the gap between center run resources and lab resources. We are working with colleagues in aerospace engineering on a large computational fluid dynamics code that use several common libraries including CHOMBO. We have successfully ported the code to the Cray (we used the compile environment at NICS – FutureGrid did not have the necessary setup) and have successfully run it on Xray by hand. The next step is to get the code to be initiated from the desktop, stage the data, and run on Xray.

Performance

The Performance group has coordinated with the Global Research Network Operations Center (GRNOC) as the machines for the perfSONAR deployment have arrived and are currently being configured.

The Vampir team continues work to optimize a molecular dynamics code using the Vampir tools on *xray*.

To set the stage for benchmarking work on FG, University of Tennessee has begun running the HPC Challenge benchmarks in virtualized environments, beginning with VMware. They obtained expected results with HPLinpack -- i.e., somewhat lower performance due to virtualization overhead but overhead was reasonably low. They are still investigating a few unexpected results and anomalies, such as FFT results for MPI and Star being faster with VMware workstation than the bare hardware results.

Training, Education, and Outreach

BOF session proposal titled “FutureGrid: what an experimental infrastructure can do for you” was submitted and accepted at TG’11. In addition to this session, there will be other FG-related presentation and tutorial activities at TG’11, as well as a Track-2D workshop with OGF on July 17th. The FG activities at TG’11 are summarized at: <https://portal.futuregrid.org/teragrid11>

Several tutorials have been added and updated in this period – a new introductory tutorial on FutureGrid HPC resources by TACC, a new introductory tutorial on ‘my Hadoop’ by SDSC, and updated tutorials on Grid appliances with Condor, MPI and Hadoop have been added to the main tutorials page: <https://portal.futuregrid.org/tutorials>

Members of the TEOS team have been interacting with two educational projects on cloud computing classes, and created forum and enhancements to the portal to enable user contributions. An evolving syllabus with slides with contributions from these projects is being maintained at: <https://portal.futuregrid.org/contrib/cloud-computing-class>

USC gave a well-received talk “A Very Brief Introduction To Cloud Computing” at the GRITS 2011 (Greater IPAC Technology Symposium) at CalTech’s IPAC (Infrared Processing and Analysis Center).

A successful tutorial has been given at CCGrid-2011, under the coordination of Gregor von Laszewski, and several attendees registered for FutureGrid accounts.

The TeraGrid-11 tutorial “An Introduction to the TeraGrid Track 2D Systems: Future Grid, Gordon, and Keeneland” has been accepted; the full-day tutorial is tentatively scheduled for July 18th.

Implemented an approach to enable users with FutureGrid educational projects to contribute educational material to the FG portal. A page describing the process of adding content has been linked from the main FG tutorials page: https://portal.futuregrid.org/community_edu_materials.

University of Tennessee submitted "Evaluation of the HPC Challenge Benchmarks in Virtualized Environments" to the 6th Workshop on Virtualization in High-Performance Cloud Computing, Bordeaux, France, August 30, 2011.

University of Florida reviewed/updated five novice-level Grid appliance tutorials to improve their flow. There are now two tutorials describing how to run appliances on a user’s desktop or FutureGrid, and three tutorials on running Condor, MPI, and Hadoop tasks on virtual appliance clusters.

In collaboration with Grid5000 colleagues, University of Chicago submitted a G5K/FG workshop proposal to SC11. The workshop is on experimental support targeting CS experiments and will serve both as a user outreach venue (identifying user requirements for experimental

infrastructure and providing information) as well as an integration venue between G5K and FG and potentially other infrastructures.

University of Florida prepared a final version for an extended abstract accepted for publication at TG' 11 in the EOT track – “Educational Virtual Clusters for On-demand MPI/Hadoop/Condor in FutureGrid”, by Figueiredo, Wolinsky and Chuchaisri.

University of Texas enhanced the HPC tutorial.

PRESENTATIONS

Geoffrey Fox, “Research and the School of Informatics and Computing,” talk at School of Informatics and Computing Summer REU Program, Indiana University, Bloomington, Indiana, June 30 2011.

Geoffrey Fox, “Cyberinfrastructure and Its Application,” California State University, Dominguez Hills Cyberinfrastructure Day, June 25 2011.

Geoffrey Fox, Shantenu Jha, Dan Katz, Judy Qiu, Jon Weissman, “Dynamic Distributed Data Intensive Analysis Environments for Life Sciences,” 3DAPAS/ECMLS Combined Panel at Workshop on Dynamic Distributed Data-Intensive Applications, Programming Abstractions, and Systems (3DAPAS) and Emerging Computational Methods for the Life Sciences Workshop, ECMLS2011 of ACM HPDC 2011 conference.

Judy Qiu, Thilina Gunarathne, Geoffrey Fox, “Classical and Iterative MapReduce on Azure Cloud Futures,” 2011 workshop, Microsoft Conference Center, Building 33 Redmond, Washington United States, June 2–3, 2011.

G. von Laszewski, A. J. Younge, and P. Marshall, “FutureGrid Tutorial,” at IEEE/ACM CCGrid Conference May 23 2011 Newport Beach, CA, USA.

Geoffrey Fox, “Tutorial on *When are Clouds useful and how can you find out if they are for you using FutureGrid? 1: Clouds will win!*” at IEEE International Symposium on Collaborative Technologies and Systems CTS 2011, May 23 2011, Philadelphia.

Geoffrey Fox, “Tutorial on *When are Clouds useful and how can you find out if they are for you using FutureGrid? 2: FutureGrid Overview,*” at IEEE International Symposium on Collaborative Technologies and Systems CTS 2011, May 23 2011, Philadelphia.

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Geoffrey Fox, “Tutorial on *When are Clouds useful and how can you find out if they are for you using FutureGrid? 3: Getting Access to FutureGrid,*” at IEEE International Symposium on Collaborative Technologies and Systems CTS 2011, May 23 2011, Philadelphia.

Geoffrey Fox, “Tutorial on *When are Clouds useful and how can you find out if they are for you using FutureGrid? 4: Virtual Appliances,*” at IEEE International Symposium on Collaborative Technologies and Systems CTS 2011, May 23 2011, Philadelphia.

Geoffrey Fox, “Tutorial on *When are Clouds useful and how can you find out if they are for you using FutureGrid? 5: Eucalyptus on FutureGrid,*” at IEEE International Symposium on Collaborative Technologies and Systems CTS 2011, May 23 2011, Philadelphia.

Geoffrey Fox, “Tutorial on *When are Clouds useful and how can you find out if they are for you using FutureGrid? 6: Image Generation and Management on FutureGrid,*” at IEEE International Symposium on Collaborative Technologies and Systems CTS 2011, May 23 2011, Philadelphia.

Jerome Mitchell, Jun Wang, Geoffrey Fox and Linda Hayden, “A Cloudy View on Computing workshop and CReSIS Field Data Accessibility,” student poster at CReSIS Advisory Board meeting, Lawrence, Kansas, April 28 2011.

Geoffrey Fox, “Cyberinfrastructure and Its Application,” University of Arkansas, Pine Bluff, MSI-CIEC Cyberinfrastructure Day, April 22 2011.

Geoffrey Fox, “Bioinformatics on Cloud Cyberinfrastructure” or Shorter Bioinformatics Track, at Bio-IT World Conference & Expo '11, World Trade Center Boston Mass, April 12-14, 2011.

J. Diaz, A. J. Younge, G. von Laszewski, F. Wang, and G. C. Fox, “Grappling cloud infrastructure services with a generic image repository,” in Proceedings of CCA11 Cloud Computing and Its Applications, April 12-13, 2011.

Jerome Mitchell, “A Cloudy View on Computing Workshop and CReSIS Field Data Accessibility,” CReSIS virtual meeting, delivered from Bloomington IN, April 5 2011

PUBLICATIONS

Geoffrey Fox, Alex Ho, Eddy Chan, “Measured Characteristics of FutureGrid Clouds For Scalable Collaborative Sensor-Centric Grid Applications,” IEEE International Symposium on Collaborative Technologies and Systems CTS 2011, Waleed Smari, Editor. May 23-27 2011, Philadelphia.

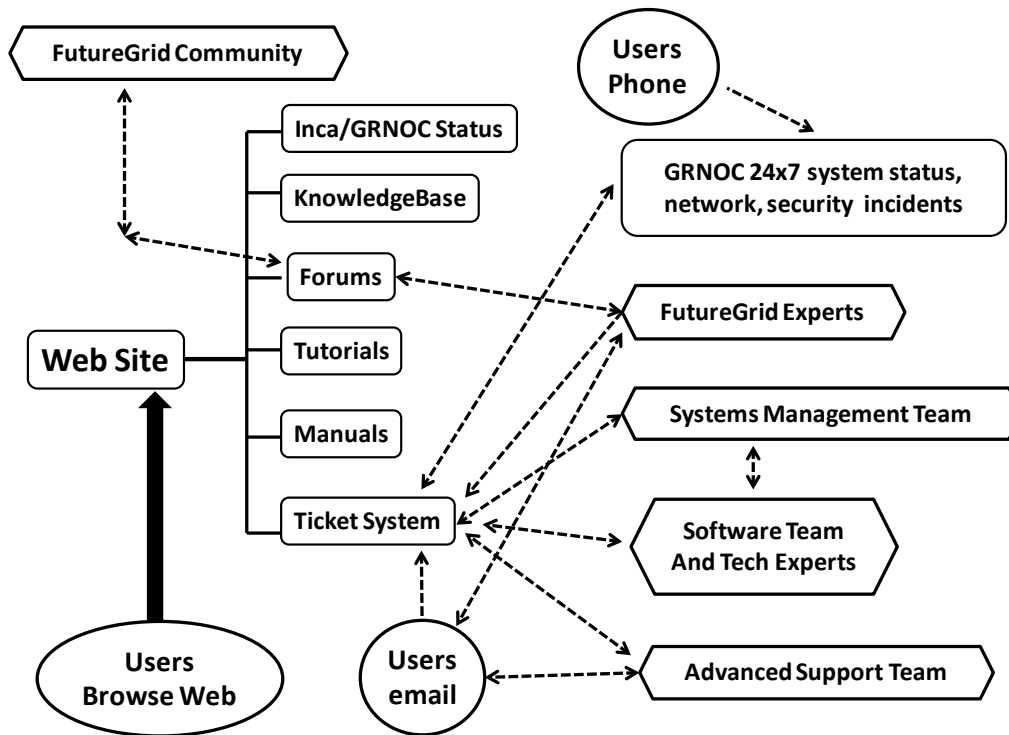
Apu Kapadia, Steven Myers, XiaoFeng Wang and Geoffrey Fox, “Toward Securing Sensor Clouds,” IEEE International Symposium on Collaborative Technologies and Systems CTS 2011, Waleed Smari, Editor, Philadelphia, May 23-27 2011

Javier Diaz, Gregor von Laszewski, Fugang Wang, Andrew J. Younge and Geoffrey Fox, “FutureGrid Image Repository: A Generic Catalog and Storage System for Heterogeneous Virtual Machine Images,” Technical report May 10 2011 submitted for publication.

Thilina Gunarathne, Judy Qiu, Geoffrey Fox, “Iterative MapReduce for Azure Cloud,” in Proceedings of CCA11 Cloud Computing and Its Applications, April 12-13, 2011

User Support

Current Support Diagram



XSEDE

XSEDE passed its NSB review with flying colors. Over the next two weeks we would like to bring the XSEDE software development and integration (SDI) lead (Kurt Wallnau of the SEI) into discussions with FutureGrid management on how XSEDE can use FutureGrid as a test and readiness review platform. This addresses comment of January review panel. Note that to test XSEDE software as it will be used in XSEDE some components need to either run as *root* or have *sudo* privileges and be able to send jobs to the HPC queues. We need to discover how this will be implemented at the FutureGrid sites.

FutureGrid Knowledge Base

Production KB entries created:

- Project Information for FutureGrid:
 - Displaying a user's project(s)
 - Joining a project
 - Adding other participants to a project
 - Creating a project for teaching
 - Project support

- Account information for FutureGrid:
 - Getting an account on the FutureGrid portal
 - Getting a user account for FutureGrid resources
 - Getting an account for Eucalyptus
 - Managing your SSH key
 - Getting FutureGrid accounts for students

- In the FutureGrid portal, how can I keep my browser from logging me in with my OpenID?

FutureGrid Portal

06/27. 05 pages reviewed and/or revised
06/13. 13 pages reviewed and/or revised
05/16. 04 pages reviewed and/or revised
05/02. 14 pages reviewed and/or revised
04/18. 12 pages reviewed and/or revised

FutureGrid Tickets

06/27. 47 new tickets created; 40 tickets resolved; 109 total tickets open
06/13. 51 new tickets created; 41 tickets resolved
05/30. 72 new tickets created; 87 tickets resolved
05/16. 26 new tickets created; 69 tickets resolved
05/02. 45 new tickets created; 59 tickets resolved
04/18. 32 new tickets created; 15 tickets resolved

Operations & Change Management Committee Summary

- In response to NSF request for Form 1030 budget documents for all institutions for all remaining years, we prepared and submitted the following:
 - Official NSF Form 1030 budgets for all institutions
 - Updated 1030 for IU
 - Updated 1030 for Florida
 - Unchanged 1030s for other partner institutions
 - Official NSF funds request, all institutions, all remaining years (PY2-4)
 - NSF-IU FG Summary Totals
 - NSF-IU Effort %s & Funding Source
 - Budgets for all partner institutions plus breakdown of PY1 carry forward \$\$
- Draft of MOU on Grid'5000 and FutureGrid Reciprocal Account Creation. Essential points in draft include:
 - FutureGrid and Grid'5000 agreed to *reciprocal account creation* where users of one institution will be able to create accounts in the other institution
 - Both sides reserve the right to introduce a quota or other reciprocal exchange policy for any reason. At this point such policy is not defined.
 - Use ViNe to organize IP traffic between IPv4 private addresses in Grid'5000 and FutureGrid
 - In the event of user behavior that is not consistent with the charter the account granting institution, corrective action will be taken first by the granting institution
 - Users will be expected to contribute success stories of using both infrastructures together

One primary concern raised was how NSF would view what could potentially become a large number of Grid5000 users on FutureGrid. To address this, allocation mechanisms and usage tracking software, specifically Gold Allocation Manager, will be used
- Preparations in progress for 2nd User Advisory Board meeting, to be held on Monday, July 18th, at TG'11.

Expenditures Report Actuals PY2 Q3 (October 2010 - June 2011)

Indiana, San Diego, Chicago

Indiana	PY2 Budget	Expense Category	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	PY2 Actuals	Remain Funds	Est Mos.
NSF	250,573	Salary and Wages	25,000.00	25,562.50	25,562.50	25,970.84	25,970.84	25,970.84	25,970.84	37,262.51	37,262.51	254,533		
ICR 54.0%	86,072	Fringe Benefits	9,175.00	9,381.44	9,381.44	9,531.30	9,531.30	9,531.30	9,531.30	13,675.34	13,675.34	93,414		
	336,645	Total Compensation	34,175.00	34,943.94	34,943.94	35,502.14	35,502.14	35,502.14	35,502.14	50,937.85	50,937.85	347,947		
	181,789	Labor Indirect Cost	18,454.50	18,869.73	18,869.73	19,171.15	19,171.15	19,171.15	19,171.15	27,506.44	27,506.44	187,891		
	518,434	Total Labor	52,629.50	53,813.67	53,813.67	54,673.29	54,673.29	54,673.29	54,673.29	78,444.29	78,444.29	535,839		
	27,881	Travel												
	0	Equipment												
	13,500	Total Subcontract ICR										13,500		
	195,289	Total Indirect Cost	18,454.50	18,869.73	18,869.73	19,171.15	19,171.15	19,171.15	19,171.15	27,506.44	27,506.44	201,391		
	559,815	Total NSF PY2	52,629.50	53,813.67	53,813.67	54,673.29	54,673.29	54,673.29	54,673.29	78,444.29	78,444.29	549,339	10,476	
San Diego	PY2 Budget	Expense Category	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	TOTAL PY2	Remain Funds	Est Mos.
ICR 54.5%	103,554	Salary and Wages	4,615.27	6,885.99	6,289.01			13,238.81	10,056.14	1,806.28				
PO 750476	32,102	Fringe Benefits	1,782.37	2,167.48	2,133.76			(304.57)						
	1,167	Supplies						36.56						
	0	Travel												
	0	Equipment												
	3,916	Computer Services	546.73	589.23	793.15			2,241.29	831.50	650.53				
	24,000	Other	1,067.70		15,550.00									
	164,739	Total Direct	8,012.07	9,642.70	24,765.92			15,212.09	10,887.64	2,456.81				
	76,703	Indirect	4,366.57	5,255.26	5,022.67			8,290.60	5,933.77	1,338.96				
	241,442	PY2 Total										0	241,442	16.2
	102,814	PY1 Remaining	12,378.64	14,897.96	29,788.59			23,502.69	16,821.41	3,795.77		101,185	1,629	0.1
	61,990	PY3 Q1												
Chicago	PY2 Budget	Expense Category	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	TOTAL PY2	Remain Funds	Est Mos.
ICR 56.0%	164,755	Salary and Wages	11,582.44	11,582.44	11,582.44	11,582.44	16,650.94							
PO 760159	48,523	Fringe Benefits	3,240.84	2,265.02	3,240.84	3,240.84	4,659.56							
	2,720	Supplies												
	13,455	Travel	2,117.10		4,409.28	1,515.66								
	0	Equipment												
	6,000	Computer Services												
	0	Other		1,946.50										
	235,453	Total Direct	16,940.38	15,793.96	19,232.56	16,338.94	21,310.50							
	131,854	Indirect	9,486.61	8,844.61	10,770.23	9,149.80	11,933.88							
	367,307	PY2 Total										0	367,307	14.9
	156,767	PY1 Remaining	26,426.99	24,638.57	30,002.79	25,488.74	33,244.38					139,801	16,966	0.7
	94,536	PY3 Q1												

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Florida, USC, Texas

Florida	PY2 Budget	Expense Category	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	TOTAL PY2	Remain Funds	Est Mos.
ICR 46.5%	95,262	Salary and Wages	5,359.32	4,423.44	5,274.32	4,934.31	5,257.32							
PO 750484	30,461	Fringe Benefits	1,617.76	1,294.87	1,617.32	1,615.62	1,617.24							
	34	Supplies												
	0	Travel												
	0	Equipment												
	0	Computer Services												
	0	Other												
	125,757	Total Direct	6,977.08	5,718.31	6,891.64	6,549.93	6,874.56							
	58,477	Indirect	3,234.34	2,659.02	3,204.61	3,045.72	3,196.66							
	184,234	PY2 Total										0	184,234	22.0
	101,069	PY1 Remaining	10,221.42	8,377.33	10,096.25	9,595.65	10,071.22					48,362	52,707	6.3
	51,130	PY3 Q1												
USC	PY2 Budget	Expense Category	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	TOTAL PY2	Remain Funds	Est Mos.
ICR 26.0%	74,153	Salary and Wages	7,121.95	5,229.08	6,706.04									
PO 740614	22,246	Fringe Benefits	2,250.53	1,652.38	2,119.10									
	2,598	Supplies												
	13,812	Travel	1,621.36	627.30										
	0	Equipment												
	6,048	Computer Services												
	44,264	Other	4,914.09	6,786.72	(5,320.37)									
	163,121	Total Direct	15,907.93	14,295.48	3,504.77									
	36,879	Indirect	7,871.27	3,245.40	404.33									
	200,000	PY2 Total										0	200,000	11.4
	45,229	PY1 Remaining	23,779.20	17,540.88	3,909.10							45,229	(0)	0
	50,000	PY3 Q1												
Texas	PY2 Budget	Expense Category	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	TOTAL PY2	Remain Funds	Est Mos.
ICR 52.0%	112,993	Salary and Wages	3,633.00	3,822.00	3,700.00	3,698.00	3,704.00	17,485.99	3,704.00	3,701.99	3,704.00			
PO 734307	28,248	Fringe Benefits	814.38	842.68	847.50	832.02	826.41	4,323.37	826.41	826.02	859.55			
	0	Supplies												
	0	Travel												
	0	Equipment												
	0	Computer Services												
	0	Other												
	141,241	Total Direct	4,447.38	4,664.68	4,547.50	4,530.02	4,530.41	21,809.36	4,530.41	4,528.01	4,563.55			
	73,445	Indirect	2,312.64	2,425.63	2,364.70	2,355.61	2,355.81	11,340.87	2,355.81	2,354.57	2,373.05			
	214,686	PY2 Total										0	214,686	30.3
	128,158	PY1 Remaining	6,760.02	7,090.31	6,912.20	6,885.63	6,886.22	33,150.23	6,886.22	6,882.58	6,936.60	88,390	39,768	5.8
	55,282	PY3 Q1												

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Virginia, Tennessee

Virginia	PY2 Budget	Expense Category	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	TOTAL PY2	Remain Funds	Est Mos.
ICR 54.0%	47,650	Salary and Wages	3,647.77	3,453.38	2,922.93	2,922.93	2,922.98	3,647.77	2,922.93	1,449.60				
PO 740593	4,451	Fringe Benefits	397.81	426.98	397.80	397.80	397.81	397.81	397.80					
	0	Supplies		200.00	175.00									
	2,686	Travel		2,160.49	2,010.37				841.80	969.20				
	0	Equipment												
	4,449	Computer Services		483.84										
	26,004	Other				3,926.00		524.60	1,774.00					
	85,240	Total Direct	4,045.58	6,724.69	5,506.10	7,246.73	3,320.79	4,570.18	5,936.53	2,418.80				
	30,610	Indirect	2,119.71	2,600.37	2,835.65	2,818.45	1,710.20	2,353.64	2,143.70	1,245.68				
	115,850	PY2 Total										0	116,171	12.5
	57,918	PY1 Remaining	6,165.29	9,325.06	8,341.75	10,065.18	5,030.99	6,923.82	8,080.23	3,664.48		57,597	321	0.0
	30,342	PY3 Q1												
Tennessee	PY2 Budget	Expense Category	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	TOTAL PY2	Remain Funds	Est Mos.
ICR 47.0%	63,453	Salary and Wages												
PO	13,742	Fringe Benefits												
	3,042	Supplies												
	8,561	Travel												
	0	Equipment												
	1,000	Computer Services												
	8,959	Other												
	98,757	Total Direct												
	42,910	Indirect												
	141,667	PY2 Total										0	141,667	TBD
	0	PY1 Remaining												
	35,417	PY3 Q1												