

# *Spring All Hands Meeting Notes*

An extremely productive SURAgrid All Hands meeting was held April 29<sup>th</sup> – May 1<sup>st</sup> in Washington, DC at SURA. Twenty representatives from fifteen organizations participated in person. Online conferencing increased attendance to close to forty participants.

Looking to shape the future directions and program sustainability, the afternoon on Wednesday was kicked off with a pair of cloud computing discussions. Dr. Mladen Vouk presented North Carolina State University's Virtual Computing Lab, a cloud-based infrastructure for providing computing services for desktop as well as high performance computing. Dr. Luis Bermudez of SURA presented a discussion of a SURA Coastal Cloud concept. Seven working group meetings concluded the program on Wednesday.

On Thursday, a joint session was held with CASC where Debbi Bucci of NIH presented the NIH's access management framework and Jennifer Schopf of NSF presented an overview of NSF's Office of Cyberinfrastructure plans and programs. John-Paul Robinson of UAB presented concepts from the forthcoming SURAgrid white paper on sustainable Cyberinfrastructure construction for campuses. The exchange and discussion between the SURAgrid and CASC communities was healthy and valuable. Several CASC members committed to review drafts of the paper as it is developed. The afternoon discussions on Thursday were on the state of SURAgrid followed by site reports from SURAgrid members, strategic relationships, and issues on authentication and authorization. The proceedings on Thursday concluded with a group dinner at Tuscana West.

An early SURAgrid Governance Committee (SGC) meeting kicked off the proceedings on Friday morning and was followed by discussions on milestones and progress moderated by Art Vandenberg. Sustainability, user engagement and strategic use of SURAgrid at member institutions were the themes for discussion until the meeting was adjourned at noon.

Throughout the course of the meeting SURAgrid members exhibited enthusiasm and assumed leadership roles for several key SURAgrid initiatives including development of a Technical Infrastructure working group, Collaboration Infrastructure Working Group, MSI Outreach Working Group, and new leadership for the ongoing support of the SURA Stack.

## **Details from the meeting:**

### **Special Topics: Cloud Computing**

Dr. Mladen Vouk presented North Carolina State University's Virtual Computing Lab. The VCL provides a cost saving approach to providing computing services for student desktop computing as well as high performance research computing. There is flexibility in providing customized environments for specific courses and on-demand construction of High Performance Compute clusters. Though it is a shared environment, the rate of failed or unfulfilled immediate and scheduled requests for access is very low. One community college case study shows a 50% cost savings using VCL to provide resources for student labs. More information on VCL can be found at <http://vcl.ncsu.edu/>. <VCL\_SURA\_v1.pdf>

Dr. Luis Bermudez presented a discussion of a potential SURA Coastal Cloud concept. This was a look at the requirements from a user perspective interested in accessing a coastal modeling environment. Currently, SURAgrid and other HPC resources don't support many of

the Web 2.0 and social networking services that could simplify interpersonal communication and the use of coastal modeling tools. <SURA\_Coastal\_Cloud.pdf>

### **Working Group Meetings**

Seven working group meetings held forty minute meetings scheduled in parallel tracks between 3:30pm and 6:25pm. Though the meeting times were short, this structure permitted in-person and remote meeting attendees to participate in all the working groups of interest. Of the seven working groups, three new groups were formed to support milestones in the SURAgriid Strategic Plan. The other four were active working groups using this opportunity to meet in-person and develop updated action plans.

### **SURAgriid Accounting Working Group**

Scribe: Dali Wang

Participants: Jaroslav Klac (remote), Steven Brandt (remote), Steven Johnson, Mahantesh Halappanavar, Mary Fran Yafchak, Dali Wang, Gary Crane, Shawn McGee

### **Background:**

- 1) Georgia State University is developing a dedicated SURAgriid usage web portal to show the capacity of each SURAgriid site and current usage. GSU demonstrated its basic functionality at a previous SURAgriid ALL-HANDS meeting.
- 2) Louisiana State University developed a SURAgriid-oriented data schema and script
- 3) Details of earlier SURAgriid data schema and other accounting activities can be found at <http://projects.uabgrid.uab.edu/sg-accounting/wiki/SURAgriidAccounting>

Technical discussion: How to identify a SURAgriid user from LSU data?

- Option 1: Use LSU certificate to identify user
- Option 2: Use email and certificate to identify SURAgriid user

### **Action items:**

- 1) GSU will develop scripts to convert data at GSU using the SURAgriid data schema.
- 2) GSU will provide/suggest a data transport procedure for SURAgriid sites to transport data into GSU site. Right now, data can be uploaded via website.
- 3) GSU will create a small project website on data schema, transport procedure, document and questions related to this effort.
- 4) LSU will provide data to GSU.
- 5) Texas A&M University will use the SURAgriid data schema and prepare accumulated usage data (on Hydra/LL records) and give it to GSU via the suggested procedure.
- 6) Old Dominion University will pull out SURAgriid usage data on SUN Grid engine using the data schema.
- 7) Group suggested the data collection frequency as once per month.

## **Collaboration Infrastructure Working Group**

Scribe: Linda Akli

Participants: Linda Akli, Brian Goldiez, Ravi Mukkamala, David McNabb, Jerry Perez, John-Paul Robinson, Mike Sachon, Eduardo Socolovsky, Art Vandenberg

### Background:

Under goal 2 of the SURAgriid Strategic Plan is a sub-goal for building a collaboration environment. (*Goal 2: Plan, manage and support the SURAgriid infrastructure to provide a solid foundation for the evolution of SURA region research and education programs. Sub-goal: Build a collaboration environment that supports the construction, operation, and management of SURAgriid, providing web and grid-based collaboration services for SURA Research Virtual Organizations.*) Additionally at the SURAgriid Fall 2008 All Hands Meeting, a discussion of a SURAgriid Collaborative Workspace was held which included presentation of favorite tools by meeting participants. Resulting from this discussion was a recommendation to experiment with the various tools over the next 3 to 6 months.

### Discussion:

Since this was a new group, everyone was asked to present why they are interested in this working group. A good part of the discussions included the use of wikis and specific wiki software as well as concern on how to improve the SURAgriid website for all SURAgriid community members (users, resource providers, et al). There was a lot of interest in using the process of this working group (in identifying software and experimenting with it) to build a SURAgriid collaborative community environment. This can inform our institutional community building initiatives as well help in improving information flow and capture of institutional knowledge for the SURAgriid community.

### Resolutions:

- 1) John-Paul Robinson agreed to chair the group
- 2) Linda Akli will be the SURA IT staff liaison and support for the group
- 3) Participants listed above constitute initial working group membership

### Action Items:

- 1) Linda will send out an email to the SURAgriid listserv to schedule the next working group call to ensure all community members interested can participate.

## **General-Purpose Graphics Processing Units (GPGPU) Working Group**

Scribe: Dali Wang

Participants: Gary Crane, Brian Goldiez, Steve Johnson, David McNabb, Mike Sachon, Dali Wang

### Background:

This is a new group that was being considered in support of the SURAgriid Strategic Plan, Goal 1 – Milestone 1: Identify Two New Collaborative Research projects.

### Discussion:

Though at the both the Fall 2008 SURAgriid All Hands meeting and at this meeting a number of SURAgriid community members expressed interest in GPGPU, no one from the community agreed to lead the group and a specific collaborative activity was not identified. This group will

be re-considered at a future time, when a more concrete driver emerges and someone agrees to lead this effort.

### **Minority Outreach**

Scribe: Linda Akli

Participants: Linda Akli, Nicole Geiger, Mahantesh Halappanavar, Jerry Perez, John-Paul Robinson, Eduardo Socolovsky, Art Vandenberg, Mary Fran Yafchak

#### Background:

This is a newly formed working group to support the SURAgriid Strategic Plan Goal 1 of developing a research outreach program to identify new users and new uses for the evolving regional and national computational and collaborative cyberinfrastructure available to the SURA region. Within this goal is a milestone to engage at least five (5) SURA region Minority Serving Institutions in the development of a SURA MSI cyberinfrastructure program.

#### Discussion:

As a new group, everyone stated why they are interested in this working group. Discussion included interest in online training and a possible SURAgriid website “clearinghouse” catalog of online training and exploring ways to work with researchers to increase the capacity of MSIs in computational science and high performance computing. Nicole Geiger agreed to get the contact information for some of the HBCUs in the Atlanta region that might be interested in working with SURAgriid. In the wrap-up discussion, the group agreed the best approach was to work with a lead MSI to develop a model for successful engagement that could be shared with other MSIs. Eduardo volunteered Norfolk State University as the MSI for this initial case study, model development. This leverages the work in progress in the Microsoft Testbed where NSU already is actively engaged providing a cluster for testing Windows HPC2008 and experimenting with bioHPC. Additionally, Eduardo agreed to chair this working group, and Jerry Perez of TTU agreed to be the co-chair. Linda Akli will continue to be the SURA staff support to this group.

### **Packaged Stack**

Scribe: Dali Wang

Participants: Nicole Geiger, David McNabb, Jerry Perez, Dali Wang

#### Background:

The Packaged Stack Working Group provides planning and progress for the packaged SURAgriid Stack, including development/maintenance of packaged stack components (currently SURAgriid usage data scheme, data conversion scripts, data report and publishing). This group has been led by Texas Tech University who did development work and provided support via standing weekly conference call.

#### Discussion:

This group discussed future activity and leadership. Nicole Geiger agreed to take on the stack support team leadership. Nicole has been actively testing and working with the group since it's inception.

## **Strategic Grid Relationships Working Group**

Scribe: Mary Fran Yafchak

Participants: Linda Akli, Paul Avery, Gary Crane, Shawn McGee, Gurcharan Khanna, John-Paul Robinson, Eduardo Socolovsky, Art Vandenberg, Mary Fran Yafchak

### Background:

This group was formed at the October 2008 SURAgGrid All-Hands to pick up on current discussions re: SURAgGrid-OSG integration and to expand exploration to strategic relationships with other grid initiatives, including caBIG and TeraGrid. From SGC discussion so far: The activities of this group support Goal 2, milestone 1, of the SURAgGrid Strategic Plan.

### Discussion:

The grid to grid discussion focused on Open Science Grid and the conversation with Paul Avery (original lead of iVDGL, which led to OSG, and instrumental in getting OSG to the point where it is today). Given Paul's attendance, we reviewed the parameters of SG-OSG engagement and confirmed the mutual value of intended activities; also our initial approach to focus on authN/Z integration. We discussed the UAB-to-OSG-via-SURAgGrid case study as an example for what we saw as an overall benefit to SG-OSG relationship.

## **Combined Condor and Scheduling Working Group**

Scribe: Mary Fran Yafchak

We acknowledged that these two topics had been placed together rather opportunistically and talked about whether a potential merger made sense. From a round-robin of participants' views and interests, we identified legitimate differences and determined that Condor and scheduling are separate working groups.

Additional thoughts from JPR on Condor/scheduling relationship:

*"I sense that the real difference seems to be between schedulers (Condor, SGE, PBS, GridWay), i.e. their implementation and operations, and grid application workflows, i.e. how to harness and manage the multitude of resources on the grid. This covers Condor (more specifically Condor-G as OSG uses it), GridWay, Swift (a scripting language for managing applications) and a multitude of other tools including a) the Portal job submit interface and b) direct launch via the Globus commands. This latter group, ties us over the users of the grid. We may want to have working groups like Schedulers (implementation and operation) and Application Orchestration Tools (harnessing and leveraging grid resources)."*

From further specific discussion on Condor - We reconfirmed interest in a working group - likely targeted and "short-term" - to bring up Condor resource(s) on SURAgGrid and get one or more applications using that. While there have always been community members that want to be involved in this, the group has lacked a consistent community lead. Jerry Perez/TTU and David McNabb/UMD agreed to co-Chair the group going forward, and SURA will identify a staff member to assist.

From further specific discussion on scheduling - JPR reviewed the work done with Gridway at UAB (also subject of April 20th SURAgGrid call - notes out soon!). Also discussed that this group has been called "metascheduling WG" to-date but "scheduling WG" may be a better term in that it is more about coordinating distributed methods rather than applying a top-down, authoritative structure. Since both the Metascheduling WG (Chair: Puri Bangalore) and deeper explorations

of Gridway have been based at UAB, JPR will coordinate internally on how best to move forward and update the community in/around June.

**Thursday April 30, 2009 - Morning Joint Meeting with CASC (<http://www.casc.org/index.html>)  
The Westin Arlington Gateway, 801 N. Glebe Road, Arlington, VA**

NIH Authentication Architecture	Debbie Bucci, NIH/CIT
NSF Office of Cyberinfrastructure Programmatic Overview and New Funding Opportunity	Jennifer Schopf, NSF/OCI
SURAgriid White Paper (Presentation & Discussion): Building a Sustainable Cyberinfrastructure In the Campus	John-Paul Robinson, UAB Gary Crane, SURA

**Thursday April 30, 2009 - Afternoon  
SURA Offices, 1201 New York Avenue, NW, Washington, DC 20005**

**State of SURAgriid** <StateofSURAgriid30Apr2009.pdf>

**Community Site Reports** <SURAgriid Site Reports 5\_08\_09.pdf>

**SURAgriid Strategic Relationships: Industry Updates and Grid-to-Grid (OSG)**

Gary Crane provided an update on SURAgriid Industry relationships including potential new offerings from IBM, Microsoft Test bed, and discussions with SAS. The Microsoft activity has expanded due to interest from RENCI and University of Florida and increased activity in the applications available for the Windows HPC 2008 environment. Phil Smith indicated that TTU was also working with Microsoft and provided James Abbot as the point of contact. Linda will follow up with James to see if TTU would like to join the Test bed project. Additionally, the Microsoft project continues to explore application usage through porting both open source and commercial software to the environment. The current application focus in the SURA-MS test bed is bioHPC, developed and supported by Cornell, though there are geosciences and virtual parasite project applications actively running on the SURA cluster.

John-Paul Robinson reviewed the status of the Strategic Grid Relations working group activities and the activities with OSG. A statement of shared interest between OSG and SURAgriid was recently finalized. The working group is focused on developing a grid interoperability demonstration for SC09. This activity is led by John-Paul for SURAgriid and Sebastian Goasguen for OSG. The objective of the developing the relationship and technical interface is to expand the SURAgriid resource pool and provide bi-directional access for researchers. There was some technical discussion of Certificate Authority issues, VOMS, GUMS, and how SURAgriid users might be mapped into a single SURAgriid user account. University of Michigan, TTU, and UAB are going to be test sites for the demo.

**Portal Issues & Policies for the Certificate Authority** <SG-portal-CA.pdf>

Steve Johnson led this discussion. One issue is the resource descriptions on the portal are not up to date. Linda Akli collected some updates during the membership renewal process and will provide them to Dali. Additionally, during this discussion, Steve Johnson and John-Paul Robinson submitted updates via email to portal-admin for their institutions' resources. Dali Wang is going to follow-up on the updates to ensure they are made. Mary Fran is going to follow-up with TACC on portal notifications and portal update list.

A fairly detailed access management discussion was held with Jim Jokl providing an update and discussion options for online system versus the current manual system. Issuing certificates online will result in a lower level of assurance. However, this may not be an issue since the demand for the higher level of assurance is not evident yet. There was some discussion of inCommons. The Access Management Working Group will take the input from this discussion and determine next steps for evolving SURAgriid's access and account management.

**Friday May 1, 2009**

**SURA Offices, 1201 New York Avenue, NW, Washington, DC 20005**

**SURAgriid Milestones & Progress discussion**

Art Vandenberg facilitated the discussion of the SURAgriid Strategic Plan Milestone status and next steps.  
<Milestones1May2009.pdf>

**Appendix B. Participant List**

	<b>Organization</b>	<b>Name</b>
1.	UAB	John-Paul Robinson
2.	UAB	Ennis Afgan (remote)
3.	UAB	Mike Hanby (remote)
4.	UAB	Poornima Puchana (remote)
5.	UAH	Sandi Harper (remote)
6.	UArk	Amy Apon
7.	UArk	David Chaffin
8.	UCF	Brian Goldiez
9.	UFL/OSG	Paul Avery
10.	GSU	Art Vandenberg
11.	GSU	Victor Bolet (remote)
12.	GSU	Nicole Gieger (remote)
13.	GSU	Jaro Klc (remote)
14.	GSU	Kelly Robinson (remote)
15.	UKy	John Connolly
16.	NCSU	Sam Averitt (remote)
17.	NCSU	Mladen Vouk (remote)
18.	NSU	Eduardo A. Socolovsky
19.	UMD	David McNabb
20.	UMD/SURA	Don Riley
21.	UMich	Shawn McKee
22.	ODU	Ravi Mukkamala
23.	ODU	Mike Sachon
24.	ODU	Halappanavar, Mahantesh M.
25.	RIT	Gurcharan Khanna
26.	SURA	Linda Akli
27.	SURA	Luis Bermudez
28.	SURA	Joanne Bintz
29.	SURA	Jerry Draayer
30.	SURA	Gary Crane
31.	SURA	Dali Wang
32.	SURA	Mary Fran Yafchak
33.	TAMU	Steve Johnson
34.	TTU	Jerry Perez
35.	TTU	Philip Smith
36.	UVA	Jim Jokl