

NMI Integration Testbed Status Report
September 2003 – February 2004
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General Update:

1) Testbed evaluation status

Testbed sites completed their evaluation of NMI Release 3 in August 2003, collectively producing 57 reports that provided feedback directly into the NMI development cycle. This continued a trend towards more practical critique born of deeper integration as sites continue to use their middleware knowledge to catalyze advanced infrastructure deployment for their campuses (enterprise directory services, campus grids) and expand remote access to resources for existing and emerging research projects. Sites began evaluating NMI Release 4 in mid-December 2003 and will complete that evaluation by May 1, 2004. Testbed site evaluation commitments and Component Testing Guidelines for R3 and R4 are available on the NMI Testbed Web site, under Status/Component Evaluation: <http://www.nsf-middleware.org/testbed>.

2) Testbed Grid Project

NMI testbed sites are sharpening their focus on the requirements to deploy truly inter-institutional grids capable of supporting a wide variety of projects within and between organizations. As part of the final year of this NMI cooperative agreement, development of an intra-testbed grid will showcase the reality and potential of grids to researchers and educators for “next generation” collaboration. Art Vandenberg, Director of Advanced Network Services, Georgia State University, is spearheading immediate deployment and also cataloging NMI Testbed sites' applications that are currently using grids or have the potential to do so. The Testbed Grid will also enable critical examination of issues that need to be resolved for scalable cross-campus grid authentication and authorization. Marty Humphrey and Jim Jokl at the University of Virginia are leading this and expanding on the use of NMI components that leverage campus enterprise credentials. Additional project background and a related status handout are available at http://www.nsf-middleware.org/testbed/testbed_status.asp#status.

3) Second Testbed results workshop “Experiences in Middleware Deployment”

The second Testbed results workshop was held November 3, preceding EDUCAUSE 2003. The workshop was attended by a total of forty-five IT management, staff and researchers from 34 different institutions. Presentations focused on those NMI components that are actively being deployed and integrated at each institution and featured speakers from the University of Alabama at Birmingham, the University of Florida, Georgia State University, Texas Advanced Computing Center, the University of Virginia, and the University of Southern California. Audience interaction was high and the workshop evaluations were very positive, with 30 of 31 respondents indicating they would attend another similar Testbed event. Presentations from the workshop are available at: <http://www.nsf-middleware.org/testbed/meetings/workshop1103/1103agenda.html>.

4) Additional Testbed Presentations: EDUCAUSE 2003, Internet2 Fall Members' Meeting, GlobusWorld 2004

As a follow-up to the Testbed results workshop, the University of Alabama at Birmingham, Georgia State University and the University of Southern California presented a track session, "Experiences in Middleware Deployment: "Teach a Man to Fish," on Thursday, November 4, at EDUCAUSE 2003. Materials are archived on the EDUCAUSE 2003 Web site:

http://www.educause.edu/asp/conf/function.asp?PRODUCT_CODE=E03/SESS105&MEETING=e03

Two Testbed-related presentations were also presented at the Internet2 Fall Members' meeting:

- "Taking Grids Out of the Lab and Onto the Campus," Georgia State University, University of Michigan, University of Southern California, <http://events.internet2.edu/2003/fall-mm/sessionDetails.cfm?session=1098>.
- "Middleware: Advanced Directory Services and Applications," University of Alabama at Birmingham, University of Florida, Georgia State University, <http://events.internet2.edu/2003/fall-mm/sessionDetails.cfm?session=1124>.

The Testbed presented in-person at GlobusWorld 2004 in January and simultaneously over the AccessGrid. Georgia State University, Texas Advanced Computing Center, the University of Michigan, the University of Alabama in Huntsville and the University of Virginia highlighted the concept of a "campus grid" and the requirements for developing inter-institutional, versus project-specific, grids. Presentation materials are available on the GlobusWorld Web site: <http://www.globusworld.org/program/conference.asp> (scroll to Thursday, 10:30 a.m. session.)

5) REU progress

Three of the five NSF REU (Research Experiences for Undergraduates) positions within the Testbed have been filled: two at Georgia State University and one at the University of Michigan. Two positions remain to be filled at TACC and UVA. The three students already onboard have been getting up to speed on NMI components and actively participating in evaluation. At the University of Michigan, the NMI REU student has been exploring and learning about different NMI components within the context of the ATLAS experiment with the goal of creating a new integrated package for use in ATLAS, built upon NMI components. Georgia State University students are working on two specific projects - "Muon particle detector GRID for K-12" and "GRID-enabled Applications, including Graphic Rendering with the GSU Digital Aquarium" - with the overall objective of creating a Grid and grid-enabling applications at GSU while at the same time providing a rich research experience for both students.

6) Future Project Planning

NMI Testbed sites and collaborators convened in Atlanta on January 26 to share institutional experiences in grid technology and begin identifying synergistic activities that could be valuable on a regional or extra-regional scale. Grid technology is an important element in the current SURA IT Strategy and also in plans for advancing academic and research infrastructure at the

Testbed sites. This meeting was a first step in exploring how best to apply expertise that has developed in the Testbed to the benefit of future projects and programs. The group identified project areas that could leverage this expertise and also benefit grid development at large. Preliminary “thinking groups” have been formed to refine select ideas and recommend next steps.