

NMI Integration Testbed Status Report

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General Update:

- 1) Testbed results workshops begin: “Experiences in Middleware Deployment”

The first Testbed results workshop was held April 8, 2003 as a pre-conference event at the I2 Spring 2003 Member’ meeting. NMI Integration Testbed sites spoke in-depth on their experiences and the lessons learned while working to implement campus grids, research grids, and enterprise-wide identity and directory services in NMI Release 1 and 2 evaluations. The workshop well received by an audience of 56 attendees. Presentations are available online on the Testbed Web site: http://www.nsf-middleware.org/testbed/testbed_status.asp.

Following the success of this workshop, additional workshops & presentations are being planned to further disseminate results and support extended deployment. Ideas being explored include a full day workshop in close proximity to and co-advertised with the EDUCAUSE annual conference being held in November 2003 (<http://www.educause.edu/conference/annual/2003>), a middleware deployment panel at SuperComputing 2003 (<http://www.sc-conference.org/sc2003/index.html>), and an NMI integration tutorial or similar presentation at GlobusWorld, <http://www.globusworld.org>.

- 2) Students participate in NMI through NSF REU (Research Experiences for Undergraduates)

On March 15, SURA submitted a proposal for an REU (Research Experiences for Undergraduates) Supplement to the existing NMI Cooperative Agreement. Seven student experiences were proposed across four Testbed sites: TACC, GSU, UMich, and UVa. All sites have experience with student programs, some with the REU specifically. Under this proposal, SURA would assure the overall quality of the program, administer funds and handle reporting. Sites would take responsibility for program quality and performance at their institution and would sign letters of agreement with SURA prior to the distribution of funds. Notification of awards is pending.

- 3) Complementary outreach through SURA PACS NMI workshop on directory services

The SURA NMI Testbed Manager and Sue Fratkin, SURA’s IT consultant and lead on the SURA PACS program, collaborated on a proposal for practical training workshops to be developed from the experience and knowledge that is being gained in the NMI Testbed. Funding has been approved under the 2003 SURA PACS grant to develop a prototype event as proof of the larger concept. A content team was assembled in January 2002, consisting of Testbed site representatives and members of the NMI-EDIT Outreach team. Participating organizations include SURA, UAB, UAH, UFL, GSU and Internet2/EDIT. The development team began meeting regularly in February and has determined a workshop topic (directory services and directory-enabled applications) and target audience. The audience will combine early adopters from the Consortium of Independent Colleges (working through CIC consultant, Ed Barboni) and the AN-MSI (working through Project Director, David Staudt.) A focus group workshop (a targeted “dress rehearsal”) is planned for June 2003; the actual event is planned for August 2003.

4) Expanding the focus of enterprise and project integration

In addition to component evaluation, each Testbed site is continuing to deepen the penetration of NMI middleware usage in both research and enterprise activities at their institutions:

- Nearly all NMI Testbed sites have initiated, catalyzed or solidified their deployment of key research and enterprise infrastructure through their participation in the NMI. Seven sites have extended their enterprise authentication, authorization and directory services to provide centralized information for applications such as click-to-dial video conferencing, self-service email configuration, campus white pages, authenticated downloads for IT management, and integrated course management systems. Four sites are actively building campus-wide research grids that will be based on or are heavily integrating NMI components; an additional two have begun to explore similar efforts as a result of their NMI work.
- NMI Testbed sites are leveraging their experience evaluating NMI components to extend the accessibility of specific research projects. Examples include:
 - The PHENIX/RHIC (Relativistic Heavy Ion Collider) project at GSU (Dr. Xiaochun He, <http://petitt.phy-astr.gsu.edu/welcome.html>)
 - GSU's work to grid-enable graphic rendering for biology students, providing support for visualization as learning modality.
 - Plans to integrate enterprise and research authentication for GSU researchers' access to the Particle Physics Data Grid (<http://www.ppdg.net/>).
 - Facilitated access for UMich researchers' to the ATLAS Grid Testbed (<http://gate.hep.anl.gov/gfg/usatlasgrid/>)
 - UAH's porting of MEAD Expedition (Modeling Environment for Atmospheric Discovery, <http://www.ncsa.uiuc.edu/expeditions/MEAD/>) data-mining applications to the GRID.
 - Study by UAH with NASA to determine the feasibility of using grid technology to support ground operations for International Space Station payloads conducted out of the Payload Operations and Integration Center (POIC) at the NASA Marshall Space Flight Center.
- Georgia State University is making a direct contribution to K-12 education through a project to bring nuclear physics project involvement to the desktops of local area Georgia high schools. This project is being led by Dr. Xiaochun He and related to the "Quarknet" project (<http://quarknet.fnal.gov/>), of which GSU is a 2003 Center. The project will incorporate GRIDS technology from GSU's NMI Testbed experience to manage distributed muon detectors among project participants.
- Several NMI Testbed sites are actively involved in independent middleware development projects. Among these are the University of Virginia ("Complex Application Requirements in Grid Computing/Legion-G/OGSA.NET"), Texas Advanced Computing Center (the NPACI Grid Portals project, <https://hotpage.paci.org>), the University of Alabama at Birmingham (ViDe.Net Middleware Project, <http://lab.ac.uab.edu/vnet/>), and GSU ("Semantic Facilitator™ (SM)" - display and analysis of directory objects). As noted in NMI Testbed site plans, the participation of PIs for these projects within the NMI Testbed is providing a valuable means of reciprocal feedback.

5) Testbed evaluation status

Testbed sites have completed their evaluation of NMI Release 2 and are proceeding with evaluation of NMI Release 3 (<http://www.nsf-middleware.org/NMIR3>.) Feedback from the Testbed is delivered to the relevant NMI component developers through documented evaluation reports. Fifty-nine reports were submitted for NMI Release 2, covering all 25 components with an average of three reports per component.