

# 21 September 2011

## Building Identity Trust Federations Conference Call

September 21, 2011

### 1) In Attendance

- Suresh Balakrishnan (University System of Maryland)
- Mark Beadles (OARnet)
- Dan Dagnall (Fischer)
- Michael Hodges (University of Hawaii)
- George Laskaris (NJEDge.Net)
- Greg Monaco (Great Plains Network & Kansas State University)
- Tom Scavo (InCommon)
- Bill Schmoekel (Owens Community College)
- Valerie Vogel (EDUCAUSE)
- Von Welch (Indiana University/CACR)
- Ann West (InCommon)

### 2) Overview of NSF ACCI Task Force on Campus Bridging Report

- *Today's slides: PowerPoint or PDF*
- Von Welch presented on behalf of Craig Stewart, who chaired the ACCI Task Force. Von Welch is the Deputy Director of Indiana University's Center for Applied Cybersecurity Research (CACR). He specializes in cybersecurity for distributed systems, particularly scientific collaborations and federated identity. He has worked with a range of high-visibility projects to provide cybersecurity to the broader scientific and engineering community, including TeraGrid, Open Science Grid, Ocean Observatory Infrastructure, and GENI. His work in software and standards includes authoring two IETF RFCs and the development of several security systems for distributed computing. Most recently Mr. Welch has served on the NSF Advisory Committee for Cyberinfrastructure Campus Bridging Task Force and founded the CIC Identity Management Research Cyberinfrastructure group.
- The Task Force was created by ACCI (Advisory Committee for Cyberinfrastructure, formed by NSF).
  - In early 2009 National Science Foundation's (NSF) Advisory Committee for Cyberinfrastructure (ACCI) charged six different task forces to make strategic recommendations to the NSF in strategic areas of cyberinfrastructure: Campus Bridging; Data; Grand Challenges and Virtual Organizations; High Performance Computing; Software and Tools; and Work Force Development. There was some overlap between the 6 task forces.
- The cyberinfrastructure definition is from an EDUCAUSE/CACR joint workshop on Campus CI. The bridging definition was chosen by the task force.
  - Cyberinfrastructure consists of computational systems, data and information management, advanced instruments, visualization environments, and people, all linked together by software and advanced networks to improve scholarly productivity and enable knowledge breakthroughs and discoveries not otherwise possible.
  - The goal of campus bridging is to enable the seamlessly integrated use among a scientist or engineer's personal cyberinfrastructure; cyberinfrastructure on the scientist's campus; cyberinfrastructure at other campuses; and cyberinfrastructure at the regional, national, and international levels; as if they were proximate to the scientist. When working within the context of a Virtual Organization (VO), the goal of campus bridging is to make the 'virtual' aspect of the organization irrelevant (or helpful) to the work of the VO.
- The campus bridging task force held 3 workshops. You will find reports/output for each workshop at: <http://pti.iu.edu/campusbridging/>.
- On slide 4, Von noted that the data is more slanted towards computing rather than storage or other aspects due to the data that was available.
- Key initial findings (1-3) are summarized on slide 5.
- For the chart on slide 6, Adequacy of Research CI, Yellow, Orange and Red indicate unmet needs. Source: Stewart, et al. Survey of cyberinfrastructure needs and interests of NSF-funded principal investigators, <https://scholarworks.iu.edu/dspace/handle/2022/9917>
- Additional findings (4-5; 6) are listed on slides 7 & 8. The task force stressed that NSF leadership is just as important as NSF funding in solving the nation's CI problems.
- The task force made 3 sets of strategic recommendations targeted to NSF, university leaders, and commercial CI providers.
  - Strategic Recommendations to the NSF (slides 9-12)
    - #1: As part of a strategy of coherence between NSF and campus CI and reducing reimplementation of multiple authentication systems, the NSF should encourage the use of the InCommon Federation global federated system by using it in the services it deploys and supports, unless there are specific technical or risk management barriers.
    - #2: NSF must lead the community in establishing a blueprint for a National CI. *Specific suggestions on how to do this, rather than what to do specifically, made in report.*
    - Tactical recommendations to NSF are listed on slide 12.
  - Strategic Recommendations to university leaders and the US higher education community (slides 13-14)
    - CIC recommendation: Collaborate at the highest levels, across campuses and at the regional level, whenever possible.
    - Tactical recommendations are provided on slide 14
  - Strategic recommendations to commercial cloud/laaS providers (see slide 16)
    - *Note that laaS providers HAVE changed licensing terms during course of the task force's work.*
- Slide 15 – Informal survey of CASC members: Are costs for research cyberinfrastructure (other than federally-funded facilities and budgeted match for those facilities) included in your institutions costs that form the basis for negotiating facilities and administration rates associated with grant budgets? We tend to see more ad hoc sources for funding
- Closing thoughts are provided on slide 17.
  - Collaborative use of infrastructure is more and more important as budgets are tightened. Campus bridging and federation are increasingly important, as well.
  - Transformative research involves ideas, discoveries, or tools that radically change our understanding of an important existing scientific or engineering concept or educational practice or leads to the creation of a new paradigm or field of science, engineering, or education. Such research challenges current understanding or provides pathways to new frontiers."
  - Scientific debates have now more importance than ever before for the US and global societies. ... It is thus a critical responsibility of the scientific community to as best possible apply the cyberinfrastructure we have and develop new cyberinfrastructure that aids transformative research, enabling understanding of the world around us and the impact on it of our activities. ... These tasks are definitely not the low hanging fruit – but they may be the most important and best fruit and thus should be our focus as a community.

- For a list of work products in addition to the task force report, see slide 18.
- Final reports from all of the task forces are available at: <http://www.nsf.gov/od/oci/taskforces/>
- Thanks and license terms are provided on slides 20-21.
- The task force has not received a formal response or analysis from NSF regarding their recommendations.
- In Maryland, Suresh noted that researchers tend to under-utilize campus services and resources (storage, IdM, etc.). Are you seeing that broadly across higher ed in the US? Are there suggested approaches to bridging that gap?
  - The second workshop includes a couple of findings relative to this. Researchers still have a hard time finding cyberinfrastructure that not s geographically approximate to them. They also have a hard time (even when they can find it) in figuring out how to effectively use it. There's a need for investment in the human expertise to help make those connections (TeraGrid champions, etc.). We really need to show them how to use these resources. There is also the broader problem – that we're not effectively using what's available.

**Next Call: November 16**