SAN DIEGO SUPERCOMPUTER CENTER

SDSC inca DATA TO DISCOVERY

Inca software for Grid testing, benchmarking and monitoring

Determining whether a Grid is "up" in the face of complex Grid software deployments can be difficult and depends on the types of applications and users that utilize it. By detailing a set of software, services, and features that should be available on a Grid in a machine-readable format, a Grid can be tested periodically by an automated system to verify its health and usability to users. To this end, we've developed Inca as a flexible framework for the automated testing, benchmarking and monitoring of Grid systems. It includes mechanisms to schedule the execution of information gathering scripts, and to collect, archive, publish, and display data. While initially developed for TeraGrid, Inca has been released as part of NMI and has been successfully deployed to GEON, NGS, CINECA, and DEISA. An Inca 2.0 release is scheduled for early 2006.

Examples of Inca in Use Today

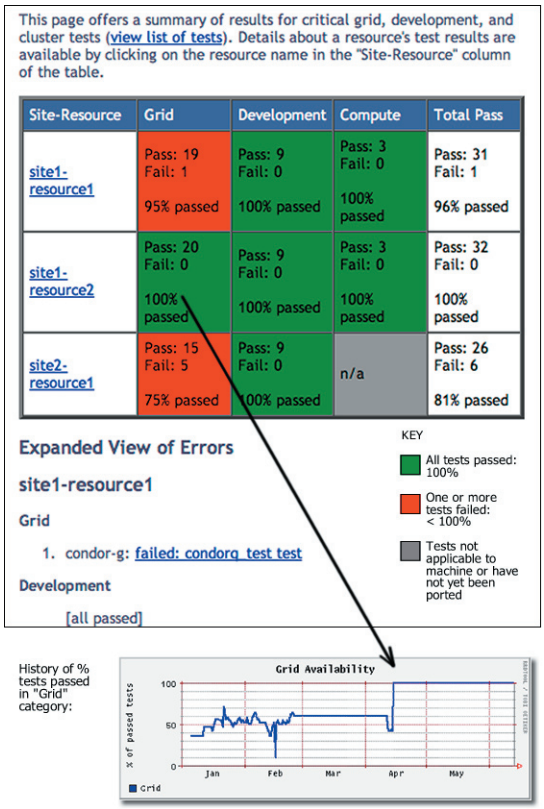
- Grid benchmarking *(see figure below)*
- Software stack validation and verification *(see figure to right)*
- Network bandwidth measurements

Grid benchmarking: Results from the "gather" Grid assessment probe designed to emulate a Grid application by transferring data, executing computation and transferring results.

News & Events

- SC|05 presentations:
  11/15, 4-5pm, TeraGrid/ANL booth
  11/16, 2-3pm, SDSC booth
- Inca 2.0 to be released January 2006
- Inca workshop tentatively scheduled for February 2006

For more information about Inca visit **http://inca.sdsc.edu** or e-mail **inca@sdsc.edu**.



Common software stack validation and verification status page

SDSC

http://www.sdsc.edu

Founded in 1985, the San Diego Supercomputer Center (SDSC) has a long history of enabling science and engineering discoveries. Continuing this legacy into the next generation, SDSC's mission is to "extend the reach" of researchers and educators by serving as a core resource for cyber-infrastructure providing them with high-end compute, storage, and software technologies. SDSC is an organized research unit of the University of California, San Diego and is funded primarily by the National Science Foundation (NSF). With a staff of more than 400 scientists, software developers, and support personnel.