Internet2 Middleware Initiative Awarded NSF Grant to Enhance Science and Research Collaboration

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The National Science Foundation (NSF) has awarded a three-year $2.65 million grant to the Internet2 Middleware Initiative to advance collaboration for virtual organizations (VOs).

Over the last decade, the Internet2 community has developed foundational authentication and authorization tools such as Shibboleth Federated and Single Sign-on System, Grouper Groups Management Toolkit, and COmanage Collaborative Management Platform. The work funded by this new grant will combine these software components together into a toolkit that will facilitate access to distributed resources and applications by domain science projects and other virtual organizations.

According to Ken Klingenstein, senior director of Middleware and Security programs for Internet2 and principal investigator for the grant, "The goal is to connect the growing identity and trust cyberinfrastructure within the R&E community back into science and research. The bedrock is being built; now its time to begin to connect research to that bedrock, so that science can leverage the robustness and sustainability of the infrastructure."

Awarded under the NSF's Software Development for Cyberinfrastructure (SDCI) program, the grant involves a partnership with several NSF-funded virtual organizations to enhance their collaboration tools and environment. Two large virtual organization partners involved in the grant are the Laser Interferometer Gravitational Wave Observatory (LIGO) and iPlant.

LIGO

LIGO is a facility dedicated to the detection of cosmic gravitational waves and the measurement of these waves for scientific research. Scott Koranda, University of Wisconsin-Milwaukee, and co-principal investigator from LIGO, comments, "Harvesting the science content from LIGO data is a collaborative effort between instrumentalists, data analysts, modelers, and theorists. Efficient collaboration begins with scalable and robust identity management infrastructure that can easily be leveraged and integrated with the wide spectrum of tools LIGO scientists use to collaborate and analyze the LIGO data."

LIGO expects the work funded by this grant to further enhance its current identity management infrastructure and allow more tools across the web, grid computing, and command line spaces to integrate tightly into the infrastructure. This will enable scientists to focus more on collaborative science and less on managing identity and credentials.

For more information on LIGO, see http://www.ligo.caltech.edu/.

iPlant

iPlant is a community-driven effort involving experts working in integrated teams to solve plant science grand challenges. "Interdisciplinary collaboration is an absolute necessity for addressing grand challenges in plant sciences," according to Nirav Merchant, University of Arizona, and co-principal investigator from iPlant. "iPlant brings together a diverse community of scientists, computational tools and technologies from a global community of institutions, infrastructure, and data providers. The ability to form virtual teams across organizational boundaries and securely share data, tools, and best practices are essential capabilities."

"This grant will facilitate extensions to the identity management infrastructure, permitting more secure and broader use of iPlant capabilities ..."

Nirav Merchant,
University of Arizona,
and co-PI from iPlant

Merchant explains that "iPlant was created specifically to address the growing need for providing access to these integrated capabilities through web based applications but also through Application Programming Interfaces (API). This grant will facilitate extensions to the identity management infrastructure, permitting more secure and broader use of iPlant capabilities by allowing our users to leverage their home institution credentials to easily access iPlant-based resources in ways that enrich their collaboration strategies."

For more information on iPlant, see http://www.iplantcollaborative.org.

More Information

For more information on the Internet2 Middleware Initiative, visit http://internet2.edu/middleware.

For more information on the NSF award, visit http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=1032468.

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