A Cyber Identity Infrastructure for National Science

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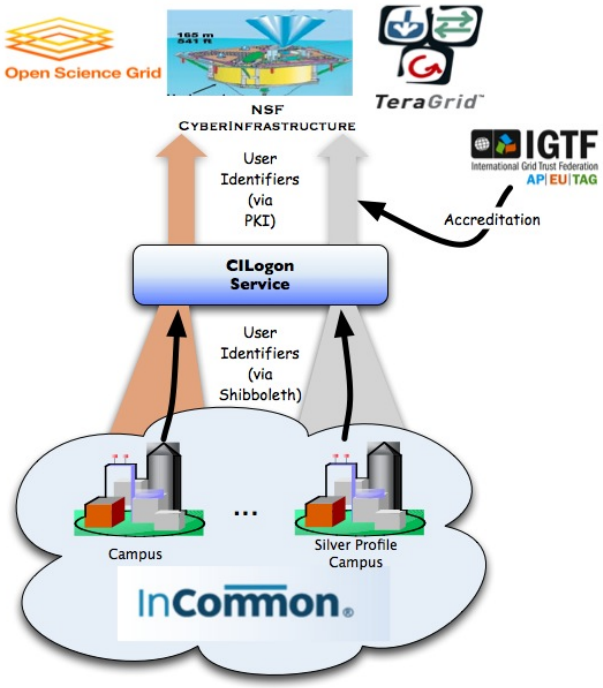
The CILogon project (www.cilogon.org) will integrate, deploy and support an open source, standards-based CILogon Service, providing the NSF research community with credentials for secure access to cyberinfrastructure (CI). The service will bridge the identity credentials generated by the nation's universities, through the InCommon Federation, to a credential that will satisfy the authentication and authorization needs of NSF's cyberinfrastructure projects.



The Challenge. The goal of our service is to allow users' credentials as managed by universities (and other research institutions) in InCommon to be used to access NSF's cyberinfrastructure. The primary technical challenge we face is the technology difference between InCommon, which is based on the Security Assertion Markup Language (SAML) as implemented by the Internet2 Shibboleth software, and NSF's cyberinfrastructure, which is based on public key infrastructures (PKIs) that emerged from computational grids.

Our Approach. Our project will leverage existing software to provide the required functionality. Much of our approach has been demonstrated in the TeraGrid single sign-on system. Since Shibboleth is a web-based technology, designed for users using web browsers, our service will be primarily a web application residing in Apache. Building on Shibboleth and Apache, we will use the work pioneered in the GridShib project, deployed in TeraGrid, to convert Shibboleth into the PKI credentials needed for much of the NSF CI. As with the TeraGrid work, we will use MyProxy with specialized hardware security modules to generate these credentials.

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