



# CILogon Project

[www.cilogon.org](http://www.cilogon.org)

GlobusWORLD 2010

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# Talk Outline

- CILogon project overview
- Software component updates and highlights (MyProxy, GridShib CA, GSI-SSHTerm)
- Introduction to the CILogon Service
  - A federated certification authority

# CILogon Project Goals

- Foster secure, usable authentication for cyberinfrastructure (CI)
- Provide community-driven **software** support:
  - MyProxy (<http://myproxy.ncsa.uiuc.edu>)
  - GridShib (<http://gridshib.globus.org>)
    - Now focused on GridShib CA
  - GSI-OpenSSH (<http://grid.ncsa.uiuc.edu/ssh>)
- Provide a new **service** that issues digital credentials to the NSF research community

# Software Highlights

- MyProxy
  - MyProxy CA
  - Trust Root Provisioning
  - VOMS support
- GridShib CA
- GSI-SSHTerm
- Usage Reporting

# MyProxy CA

- Online Certification Authority (CA)
  - Integrates with external identity management systems via PAM, SASL, LDAP, and call-out interfaces
  - Integrates with web authentication (SAML/Shibboleth, OpenID) via GridShib CA
  - Integrates with Hardware Security Modules (HSMs) and other CA back-ends
- International Grid Trust Federation (IGTF) accredited deployments at NCSA, PSC (in progress), and NERSC
  - Meeting IGTF requirements for certificate extensions, logging, revocation, etc.

<http://myproxy.ncsa.uiuc.edu/ca>

# MyProxy Trust Root Provisioning

- MyProxy clients support “bootstrapping” and maintaining trust root configuration: CA certificates, CRLs, etc.
- ‘myproxy-logon –T’ obtains trust roots with credential
- ‘myproxy-get-trustroots’ installs/updates trust roots for users and services
- Supported by C and Java clients

<http://myproxy.ncsa.uiuc.edu/trustroots>

# MyProxy VOMS Support

- VOMS: Virtual Organization Membership Service
- MyProxy supports:
  - Storing credentials containing VOMS extensions
  - Adding VOMS extensions on the client-side ('myproxy-init/myproxy-logon --voms')
  - Adding VOMS extensions on the server-side
    - Avoids need for client-side VOMS software/configuration
  - VOMS authorization in the myproxy-server
    - Setting myproxy-server access control policies based on VOMS attributes

<http://myproxy.ncsa.uiuc.edu/voms>

# GridShib CA

- GridShib CA 2.0
  - Support for multiple web authentication systems
    - OpenID in addition to Shibboleth
  - Support for different credential retriever clients
    - Python client provided in addition to Java Web Start
  - Use of one-time sessions for credential retriever client authentication
    - Instead of Shibboleth-specific cookies
  - Framework that allows for easy addition of modules for additional functionality.

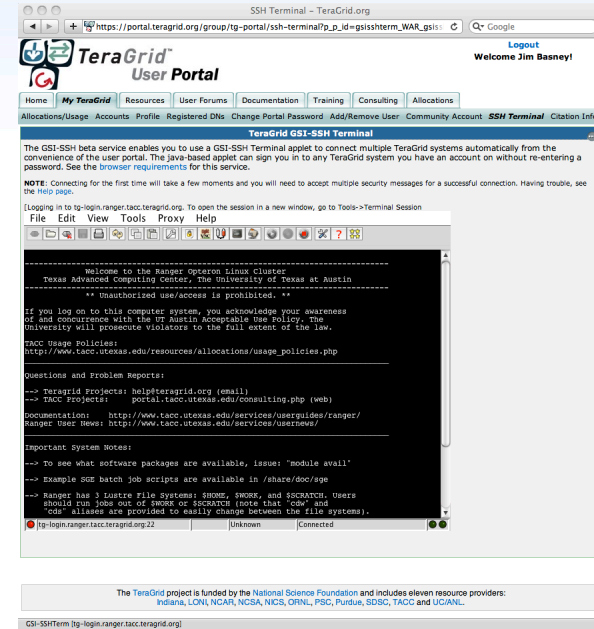


<http://gridshibca.cilogon.org>



# GSI-SSHTerm

- Full-featured Java GSISsh client
  - Applet integrates well with portals
  - Java Web Start application runs on the desktop
  - Integrated with MyProxy
- Developed by UK National Grid Service
- Recent fixes/improvements:
  - Support gssapi-keyex and gssapi-with-mic methods (RFC 4462)
  - Improved error messages and error handling
  - Ability to force GSI methods only



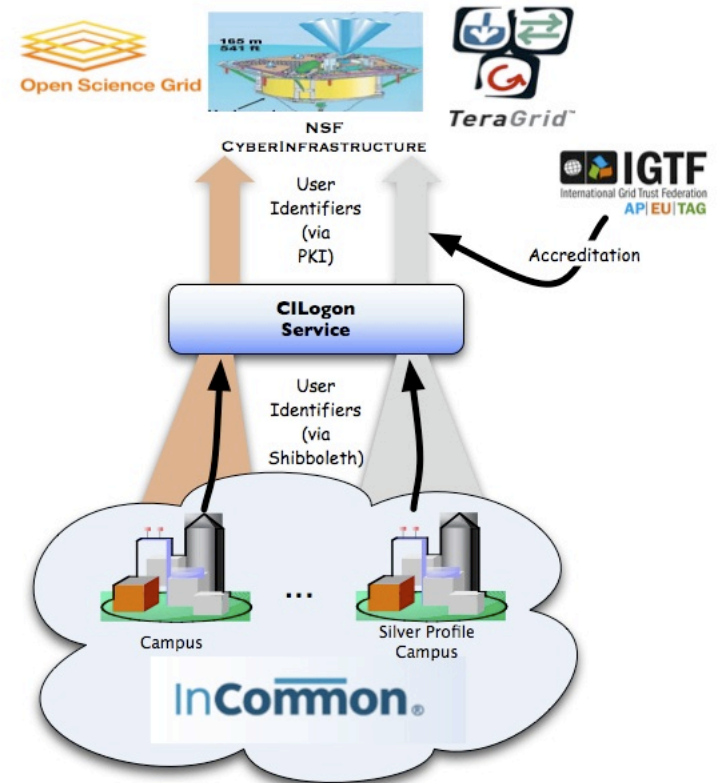
<http://sourceforge.net/projects/gsi-sshterm/>

# Usage Reporting

- Globus Usage Metrics added to MyProxy and GSI-OpenSSH
  - <http://myproxy.ncsa.uiuc.edu/privacy>
  - <http://grid.ncsa.illinois.edu/ssh/privacy.html>
- Default behavior:
  - Servers send UDP packets to [usage-stats.cilogon.org](http://usage-stats.cilogon.org) (port 4810)
    - No user identifying information is reported
  - To opt-out: set `GLOBUS_USAGE_OPTOUT=1` in server environment
- You can configure your own listener to collect usage statistics for your organization
  - Optionally including user information if desired

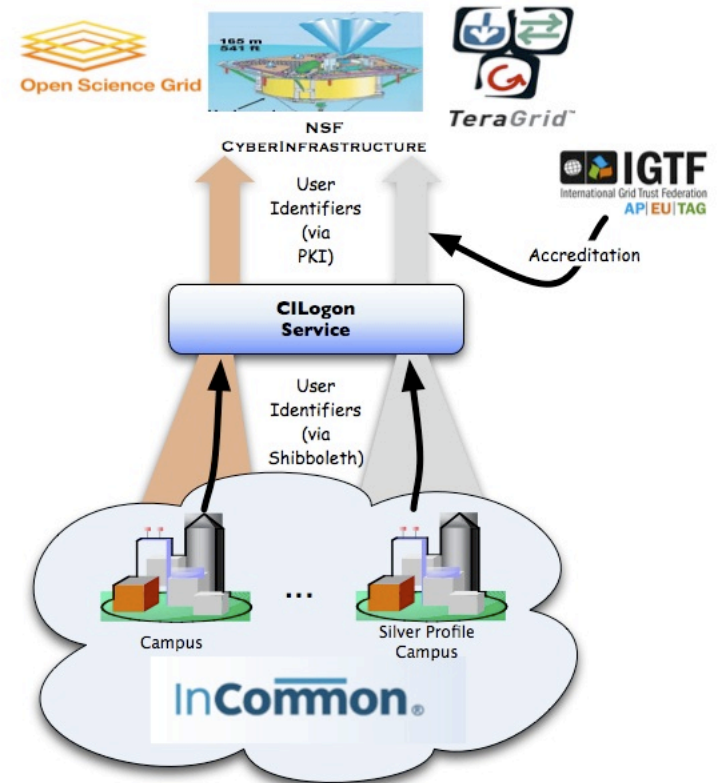
# CILogon Service

- Facilitate campus login to NSF CI
  - Leverage researchers' existing identities at their home institution
  - Ease identity management for researchers and CI providers
- Bridge from:
  - Identity credentials issued by research institutions participating in the InCommon Federation using Shibboleth/SAML web browser single sign-on
- Bridge to:
  - X.509 PKI credentials that satisfy the requirements of NSF CI projects



# CILogon Service: Timeline

- September 2009:
  - Federated Login to TeraGrid Deployed (<https://go.teragrid.org>)
  - CILogon Project Start
- April 2010 (Planned):
  - Prototype Service Deployed
  - TAGPMA Accreditation
- September 2010 (Planned):  
Operational Service Deployed



# Thanks

- For more information:
  - Contact: [jbasney@illinois.edu](mailto:jbasney@illinois.edu)
  - Visit: [www.cilogon.org](http://www.cilogon.org)