Secure Access to Research Infrastructure via the InCommon Federation

Jim Basney
jbasney@ncsa.uiuc.edu

National Center for Supercomputing Applications
University of Illinois at Urbana-Champaign
CILogon Project Goal

• Enable campus logon to CyberInfrastructure (CI)
  – Use researchers’ existing security credentials at their home institution
  – Ease credential management for researchers and CI providers
InCommon Federation

InCommon is the federation for U.S. research and education, providing higher education and their commercial and non-profit partners with a common trust framework for access to online resources.
About InCommon

- Through InCommon, campuses leverage their identity databases to allow for the use of one set of credentials to access multiple resources.
- Online service providers no longer need to maintain user accounts.
- Identity providers manage the levels of their users' privacy and information exchange.
- InCommon uses SAML-based authentication and authorization systems (such as Shibboleth®) to enable scalable, trusted collaborations among its community of participants.
InCommon Participants Year-by-Year

- 253 InCommon Participants (Sept. 2010)
- Almost 5 million end-users (faculty, staff, students)
## Current InCommon Participants

A community of more than **4.5 million end users.**  
(Source: Higher Education Students, Faculty, and Staff, Integrated Postsecondary Education Data System. Calculated April 2010.)

<table>
<thead>
<tr>
<th>Higher Education Participants (180)</th>
<th>Government and Nonprofit Laboratories, Research Centers, and Agencies (7)</th>
<th>Sponsored Partners (66)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>American University</strong></td>
<td><strong>Argonne National Laboratory</strong></td>
<td>Absolute Software, Inc.</td>
</tr>
<tr>
<td>Arizona State University</td>
<td>Energy Sciences Network (ESNet)</td>
<td>ALEKS Corporation</td>
</tr>
<tr>
<td>Augsburg College</td>
<td>Lawrence Berkeley National Laboratory</td>
<td>Alexander Street Press</td>
</tr>
<tr>
<td>Baylor University</td>
<td>Moss Landing Marine Laboratories</td>
<td>Apple - iTunes U</td>
</tr>
<tr>
<td>Brown University</td>
<td>National Institutes of Health</td>
<td>Atlas Systems, Inc.</td>
</tr>
<tr>
<td>California Institute of Technology</td>
<td>National Science Foundation</td>
<td>BioOne, Inc.</td>
</tr>
<tr>
<td>California Maritime Academy</td>
<td>TeraGrid</td>
<td>Blatant Media Corporation</td>
</tr>
<tr>
<td>California Polytechnic State</td>
<td></td>
<td>Burton Group</td>
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<tr>
<td>University, San Luis Obispo</td>
<td></td>
<td>Cambridge University Press</td>
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<tr>
<td>California State Polytechnic</td>
<td></td>
<td>Cayuse, Inc.</td>
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<tr>
<td>University, Pomona</td>
<td></td>
<td>Cengage Learning, Inc.</td>
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<tr>
<td>California State University,</td>
<td></td>
<td>Colorado Alliance of</td>
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<tr>
<td>Bakersfield</td>
<td></td>
<td>Research Libraries</td>
</tr>
<tr>
<td>California State University,</td>
<td></td>
<td>CSO Research, Inc.</td>
</tr>
<tr>
<td>Channel Islands</td>
<td></td>
<td>Davie County Schools</td>
</tr>
</tbody>
</table>

[InCommon website](http://www.incommon.org)
**Federated Resources**

Resources available via InCommon are many and diverse

<table>
<thead>
<tr>
<th>Business Functions</th>
<th>Learning and Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Benefits</td>
<td>• Journals</td>
</tr>
<tr>
<td>• Asset management</td>
<td>• Databases and analytical tools</td>
</tr>
<tr>
<td>• Talent management</td>
<td>• Multi-media access</td>
</tr>
<tr>
<td>• Visas &amp; INS compliance</td>
<td>• Homework labs</td>
</tr>
<tr>
<td>• Mobile alerts</td>
<td>• Quiz tools</td>
</tr>
<tr>
<td>• Travel management</td>
<td>• Plagiarism detection</td>
</tr>
<tr>
<td>• Energy management</td>
<td>• Software downloading</td>
</tr>
<tr>
<td>• Surveys and market analysis</td>
<td>• Alcohol awareness education</td>
</tr>
<tr>
<td></td>
<td>• Student travel discounts</td>
</tr>
<tr>
<td></td>
<td>• Transportation and ride-share services.</td>
</tr>
</tbody>
</table>

Strong support from key higher education partners, such as: Microsoft, Apple, National Student Clearinghouse, NSF, NIH, Gov-affiliated Labs
https://go.teragrid.org

- Campus login to TeraGrid
- 35 campuses so far (including all CIC schools)
- Available since Sep 2009
- 1000+ logins by 65+ users (so far)
- Integration with portal.teragrid.org underway
- IDtrust 2010 paper: “Federated Login to TeraGrid” (http://middleware.internet2.edu/idtrust/2010/)
Welcome to go.teragrid.org!

What is go.teragrid.org?
This site allows you to access TeraGrid resources by using the login mechanism provided by your university/organization.

How does go.teragrid.org work?
This site maps your TeraGrid username to a Shibboleth Identity provided by a participating university. This identity is typically used for single sign-on (SSO) purposes and is issued by an Identity Provider (IdP). If you don't have an account with any of the universities listed in the dropdown box on the left, you can get a free account at ProtectNetwork which will serve as your IdP.

How do I use go.teragrid.org?
These instructions are for initial setup only. You will need to complete these steps once for each IdP you wish to utilize to access TeraGrid resources.

1. Have your login information handy for both of these systems:
   a. Your TeraGrid-wide (User Portal) username and password that you received in your TeraGrid account information packet.
   b. An account at one of the Identity Providers (IdPs) listed in the dropdown box on the right.
2. Select your IdP from the dropdown list under “Select Your Identity Provider”.
3. Click the “Login” button. You will be redirected to your organization’s login page.
4. Log in with your IdP username and password. You will then be redirected back to this site.
5. Log in to TeraGrid using your TeraGrid-wide username and password. This step validates the existence of your TeraGrid account and will need to be done only once. No passwords are saved on this site. This completes the mapping between your Shibboleth Identity and your TeraGrid username.

How do I access TeraGrid resources?
This site provides several ways to access TeraGrid resources:

- Download a credential to your local computer via the GridShib-CA Java Web Start (JWS) client.
- Run the GSI-SSHTerm JWS client on your desktop utilizing a previously downloaded credential.
- Run the GSI-SSHTerm applet in your browser.
- Run the TeraGrid File Manager applet in your browser.

For these activities, you will need Java 1.5 or higher installed on your computer.

The TeraGrid project is funded by the National Science Foundation and includes eleven resource providers: Indiana, LONI, NCAR, NCsa, NICs, ORNL, PSC, Purdue, SDSc, TACC and UC/ANL.

This site uses software from the MyProxy and GridShib projects.

Please send any questions or comments about this site to go-admin@teragrid.org.
TeraGrid
Welcome University of Illinois at Urbana-Champaign User

Associate Identity With TeraGrid Username
It appears that this is the first time you have logged on to this site with your Identity provided by University of Illinois at Urbana-Champaign. In order to utilize TeraGrid resources, you must first log in to your TeraGrid account. You will use the same username and password you use to log on to the TeraGrid User Portal.

This step needs to be performed only once for each identity. Future logins with your Identity will be associated with your TeraGrid username, thus bypassing this step.

Note that this step only verifies that you can log in to TeraGrid with a particular username. No password information is stored on this site.

Log in to TeraGrid
Username: [blank]
Password: [blank]
Login
Forgot your password?

Manage Associations
Below is a table showing all identities associated with TeraGrid username "jasney". If you want to delete any of them, check the appropriate box in the "Delete?" column and click the "Delete Checked" button.

If you delete the association for the current Identity (shown in italics), you will be required to log in to TeraGrid again to re-establish the association.

<table>
<thead>
<tr>
<th>Delete?</th>
<th>Identity Provider</th>
<th>Created</th>
<th>Last Access</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>University of Illinois at Urbana-Champaign</td>
<td>2010-04-06 13:05:28:28</td>
<td>2010-04-06 13:09:47:05</td>
</tr>
</tbody>
</table>

Go Back

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Please send any questions or comments about this site to go-admin@teragrid.org.
Welcome University of Illinois at Urbana-Champaign User

Connections and Management

Your identity is associated with the TeraGrid username "jbasney". You can now perform one of the following actions: connect to the command line of compute and visualization resources (two methods); manage your files with a drag-and-drop interface; or manage your identity associations. For most of these activities, you will need Java 1.5 or higher installed and enabled in your browser.

A. Connect To TeraGrid With A Desktop Version of GSI-SSHTerm

   1. Download a credential to your local computer.
   2. Click the "Launch GSI-SSHTerm JWS" button to start the desktop application.
   3. Select the "File->New Connection" menu and enter your desired target TeraGrid resource.

   More Information About Desktop GSI-SSHTerm...

B. Connect To TeraGrid With A Browser-Based Version of GSI-SSHTerm

   1. Select the desired target TeraGrid resource from the dropdown box.
   2. Click the "Login With GSI-SSHTerm" button.

   More Information About The GSI-SSHTerm Applet...

C. Transfer Files Via A Drag-And-Drop Interface

   1. Click the "TeraGrid File Manager" button.
   2. Select the desired target TeraGrid resource for transferring files.

   More Information About The File Manager...

D. Manage Identity Associations

   - Click the "Manage Associations" button to view or delete identity mappings.

   More Information About Identity Management...

Logout

To end your secure session, click the "Logout" button.
CILogon: Beyond TeraGrid
Challenge: Federating with Many Campuses
Roadmap for using NSF CI with InCommon

• A practical guide under development now
• For current draft, visit:

https://spaces.internet2.edu/display/nsfciinc
Thanks!

- Questions? Comments?

- Have I convinced you that Notre Dame should join InCommon? 😊

- Contact: jbasney@illinois.edu