



Secure Access to Research Infrastructure via the InCommon Federation

Jim Basney

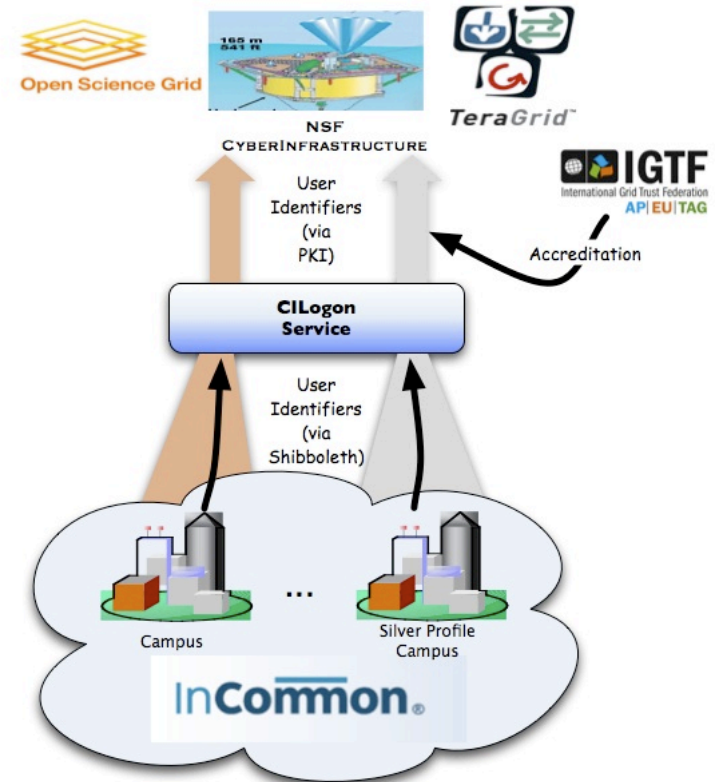
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National Center for Supercomputing Applications
University of Illinois at Urbana-Champaign

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

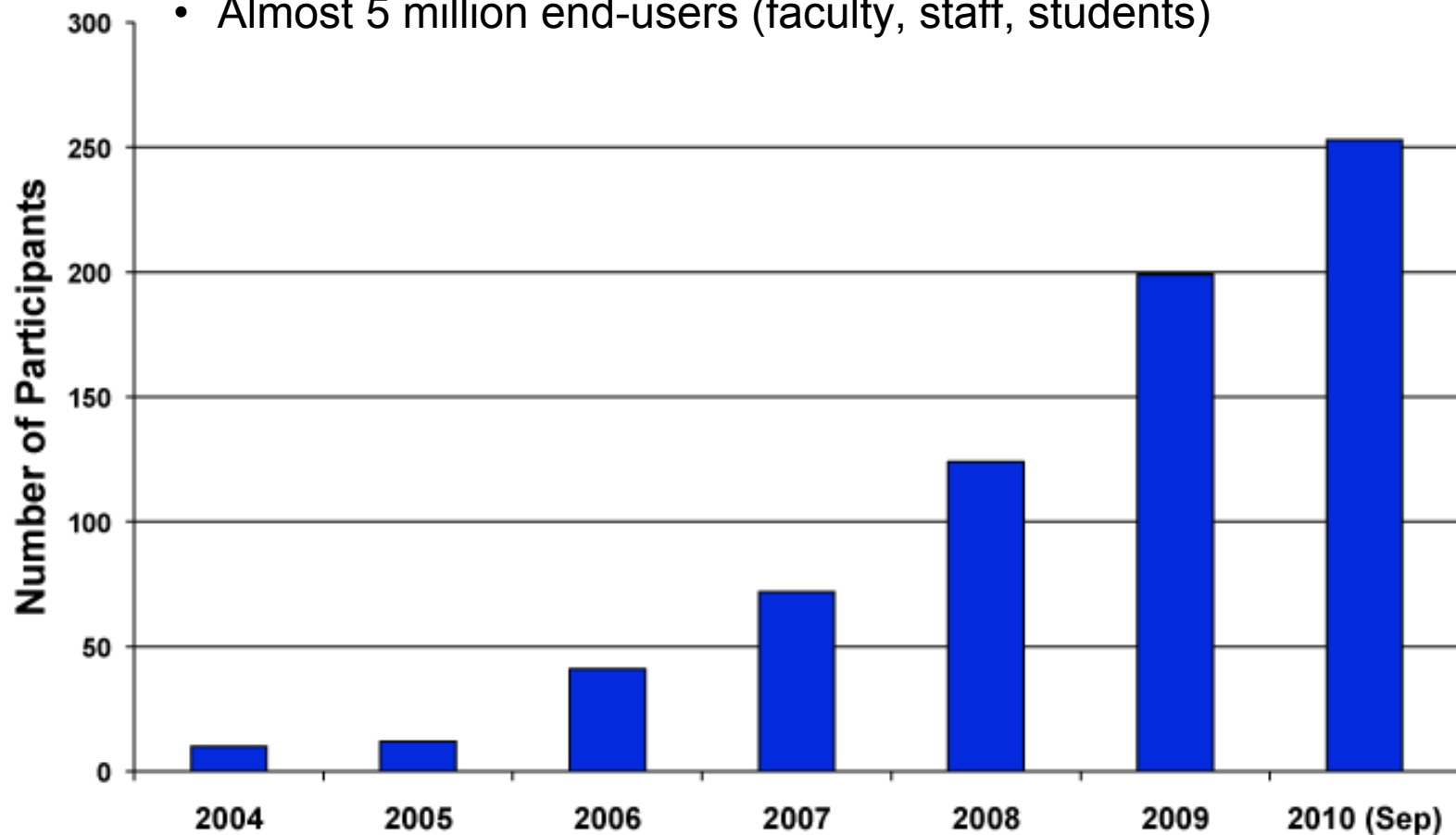
InCommon is the federation for U.S. research and education, providing higher education and their commercial and non-profit partners with a common trust framework for access to online resources.

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)



[Join InCommon](#)[Participants](#)[IAM Online](#)[Education and Training](#)[Affiliates](#)[Certificate Service](#)[Policies and Practices](#)[Technical Information](#)[Software Guide](#)[Metadata and WAYF](#)[Site Administrator Info](#)[Frequently Asked Questions](#)[Benefits](#)[Site Administrator Login](#)[Collaboration Wiki](#)[Glossary](#)[Contact Us](#)[About](#)

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.)

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

Federated Resources

Resources available via InCommon are many and diverse

Business Functions

- Benefits
- Asset management
- Talent management
- Visas & INS compliance
- Mobile alerts
- Travel management
- Energy management
- Surveys and market analysis

Learning and Research

- Journals
- Databases and analytical tools
- Multi-media access
- Homework labs
- Quiz tools
- Plagiarism detection
- Software downloading
- Alcohol awareness education
- Student travel discounts
- Transportation and ride-share services.

Strong support from key higher education partners, such as: Microsoft, Apple, National Student Clearinghouse, NSF, NIH, Gov-affiliated Labs



www.teragrid.org

<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/>)

A screenshot of a web browser displaying the go.teragrid.org website. The browser's address bar shows "https://go.teragrid.org/". The page has a green header with the "GO TeraGrid" logo. The main content area is titled "Welcome to go.teragrid.org!" and contains several sections: "What Is go.teragrid.org?", "How Does go.teragrid.org Work?", "How Do I Use go.teragrid.org?", and "How Do I Access TeraGrid Resources?". The "How Does go.teragrid.org Work?" section includes a dropdown menu for "Select your Identity Provider" with "University of Illinois at Urbana-Champaign" selected. Below the dropdown is a "Remember for one week (?)" checkbox and a "Login" button. The "How Do I Access TeraGrid Resources?" section lists several steps for accessing resources, including downloading a credential, running the GSI-SSH Term JWS client, and running the TeraGrid File Manager applet. At the bottom of the page, there is a small text block stating that 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.



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 set up 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.

Select your Identity Provider

University of Illinois at Urbana-Champaign

☐ Remember for one week (?)

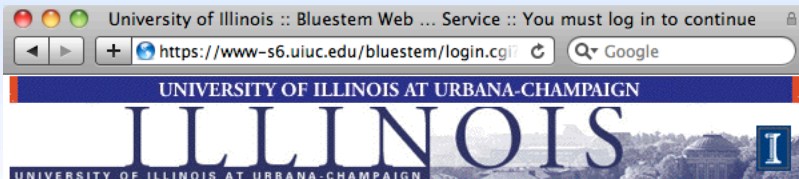
Login

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](#).



UIC and UIS visitors:
Add @uic.edu or @uis.edu to your UIC or UIS NetID.
For example, if your UIC NetID is joan, enter joan@uic.edu.

Forgot your NetID password?
To change or reset your NetID password, go to the CITES Password Manager page.

More Information

Where to Get Help

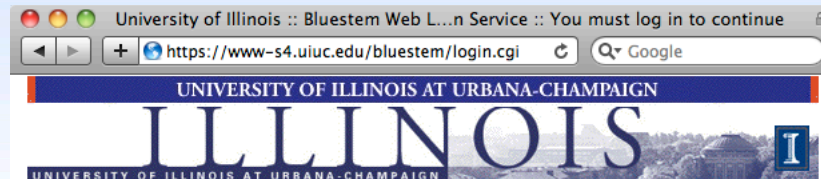
- **Urbana campus:** Contact the CITES Help Desk at consult@illinois.edu
- **Chicago campus:** Contact ACCC at (312) 413-0003 or consult@uic.edu
- **Springfield campus:** Contact Information Technology Services at 217-206-6000 or techsupport@uis.edu

What Is a NetID?

Your NetID serves as your login to many University computing and networking services and also determines your University email address, which is netid@illinois.edu.

For more information, see the [Your Network ID \(NetID\)](#) page.

CITES Help Desk - consult@uiuc.edu



Forgot your NetID password?
To change or reset your NetID password, go to the CITES Password Manager.

More Information

To maximize security, quit your browser when done using this application.

Where to Get Help

- **Urbana campus:** Contact the CITES Help Desk at consult@illinois.edu
- **Chicago campus:** Contact ACCC at (312) 413-0003 or consult@uic.edu
- **Springfield campus:** Contact Information Technology Services at 217-206-6000 or techsupport@uis.edu

Technical Information

The only servers authorized to ask for your NetID password are this page and the CITES Password Manager at passwords.cites.uiuc.edu.

This login service uses the following servers:

- www-s4.uiuc.edu
- www-s5.uiuc.edu
- www-s6.uiuc.edu
- www-s3.uiuc.edu

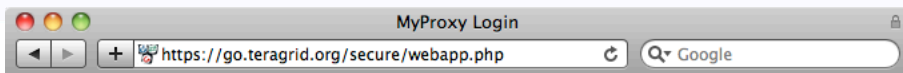
This page's URL should start with <https://> followed by one of the servers listed above.

Report the URL of any other server that asks for your NetID password to the CITES Help Desk at consult@illinois.edu.

For most web browsers, the security padlock icon for this page should be closed/locked.



CITES Help Desk - consult@illinois.edu



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

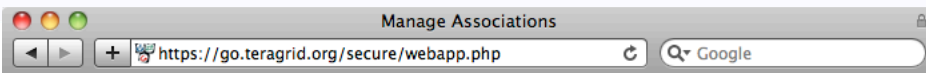
Username:

Password:

[Login](#)

[Forgot your password?](#)

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.



Manage Associations

Below is a table showing all identities associated with TeraGrid username "jbasney". 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.

Delete?	Identity Provider	Created	Last Access
<input type="checkbox"/>	<i>University of Illinois at Urbana-Champaign</i>	2010-04-06 13:05:28-05	2010-04-06 13:09:47-05

[Delete Checked](#)

[Go Back](#)

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(one-time only)

GO
TeraGrid™

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.

Download Credential

Launch GSI-SSHTerm JWS

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...

Abe

Login With 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...

TeraGrid File Manager

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...

Manage Associations

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.

GSI-SSHTerm Applet

https://go.teragrid.org/secure/webapp.php

 **GO TeraGrid**

Welcome University of Illinois at Urbana-Champaign User

GSI-SSHTerm Applet - login-abe.ncsa.teragrid.org

```
File Edit View Tools Proxy Help
Last login: Tue Apr 6 13:08:14 2010 from bit.ncsa.uiuc.edu
Welcome to the NCSA Abe/Lincoln Cluster:
abe.ncsa.uiuc.edu
lincoln.ncsa.uiuc.edu

Unauthorized use/access is prohibited.
For more detailed information about this system, see:
abe:
http://www.ncsa.uiuc.edu/UserInfo/Resources/Hardware/Intel64Cluster/
lincoln:
http://www.ncsa.uiuc.edu/UserInfo/Resources/Hardware/Intel64TeslaCluster/
*****
For additional information see:
http://www.ncsa.illinois.edu/UserInfo/Data/MSS/Doc/mssquota.html
For any questions, please contact the Helpdesk at help@teragrid.org
[jbasney@honest2 ~]$
```

login-abe.ncsa.teragrid.org:22 Unknown Connected

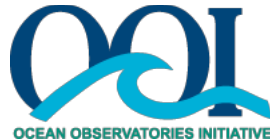
[Go Back](#)

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CILogon: Beyond TeraGrid



Open Science Grid



LIGO
Scientific
Collaboration

Welcome To The CILogon Service

CILogon Service

Welcome To The CILogon Service

About The CILogon Service

What Is The CILogon Service?

The CILogon Service allows users to authenticate with their home organization and obtain a certificate for secure access to [Cyberinfrastructure \(CI\)](#). Additional information can be found at [www.cilogon.org](#).

CILogon + Your Organization = Secure Access to CI

How Does The CILogon Service Work?

The CILogon Service is a member of [InCommon](#), a formal federation of over 200 universities, agencies, and organizations. Many of these organizations maintain an authentication service to provide their users with web single sign-on. An InCommon organization can partner with the CILogon Service to provide user information for the purpose of issuing certificates. These certificates can then be used for accessing cyberinfrastructure resources.

How Do I Use The CILogon Service?

Select your organization from the drop-down list, then click the "Log On" button. You will be redirected to your organization's login page. After you authenticate with your organization as you typically would, you will be redirected back to the CILogon Service. Then you will be able to fetch a certificate for use with cyberinfrastructure resources.

What If I Don't See My Organization Listed?

If you don't have an account with any of the organizations listed in the drop-down list in the "Start Here" menu, you can register for a free user account at [ProtectNetwork](#) for use with the CILogon Service. Also, you can make a request for your organization to appear in the list of available organizations. Identity Provider administrators can view the [InCommon Participant Operational Practices](#) document for the CILogon Service and then test and add their identity provider to the CILogon Service.

Can I Use OpenID Instead?

The CILogon Service also supports the use of OpenID as an alternate authentication mechanism. Many users have an OpenID account without even knowing it. For example, you can use your Google or Yahoo account for OpenID authentication. However, the certificates issued to OpenID users may be accepted by fewer cyberinfrastructure resource providers than those issued to InCommon users.

What If I Have More Questions?

Please see the [CILogon FAQ](#) for answers to frequently asked questions. If your question is not answered there, please use the email address at the bottom of this page to contact us.

Note: You must enable cookies in your web browser to use this site.

Start Here

Select An InCommon Organization:

[University of Illinois at Urbana-Champaign](#)

Remember this selection: ☐

Log On

Use OpenID instead


By selecting "Log On", you agree to our [privacy policy](#).

Know your responsibilities for using the CILogon Service.
This material is based upon work supported by the National Science Foundation under grant number 0943633.
Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.
Please send any questions or comments about this site to [help@cilogon.org](#).

Challenge: Federating with Many Campuses

Test Identity Provider

https://cilogon.org/secure/testidp/

 **CILogon Service**

Test Your Organization's Identity Provider

Verify SAML Attribute Release Policy

Thank you for your interest in the CILogon Service. This page allows the administrator of an Identity Provider (IdP) to verify that all necessary SAML attributes have been released to the CILogon Service Provider (SP). Below you will see the various attributes required by the CILogon Service and their values as released by your IdP. If all required attributes are present, you can add your IdP to the list of organizations available to the CILogon Service (assuming it has not already been added).

Summary

✓ All required attributes have been released by your IdP. For details of the various attributes utilized by the CILogon Service and their current values, see the sections below.

Add Your IdP to the CILogon Service

▼ SAML Attributes

Identity Provider (entityID): urn:mace:incommon:uiuc.edu

ePTID:

ePPN: jbasney@illinois.edu

First Name (givenName): James

Last Name (sn): Basney

Display Name (displayName): James Alan Basney

Email Address (email): jbasney@illinois.edu

Level of Assurance (assurance):

▼ Metadata Attributes

Organization Name: University of Illinois at Urbana-Champaign

Home Page: http://www.uiuc.edu/index.html

Technical Contact: Mike Grady <m-grady@uiuc.edu>

Administrative Contact: Mike Grady <m-grady@uiuc.edu>

The CILogon Service is funded by the National Science Foundation under grant number 0943633.
This site uses software from the MyProxy and GridShib projects.
Please send any questions or comments about this site to help@cilogon.org.

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