

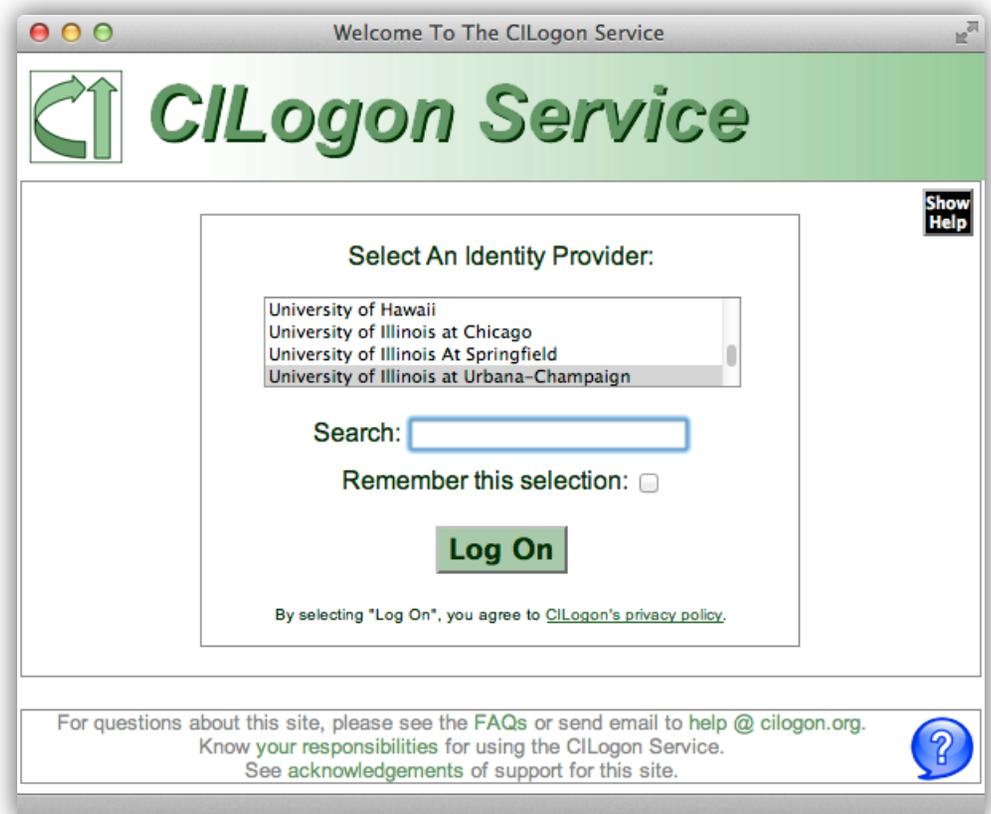
CILogon and InCommon: Technical Update

Jim Basney <jbasney@ncsa.illinois.edu>

This material is based upon work supported by the National Science Foundation under grant numbers 0943633 and 1053575 and by the Department of Energy under award number DE-SC0008597. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the United States Government or any agency thereof.

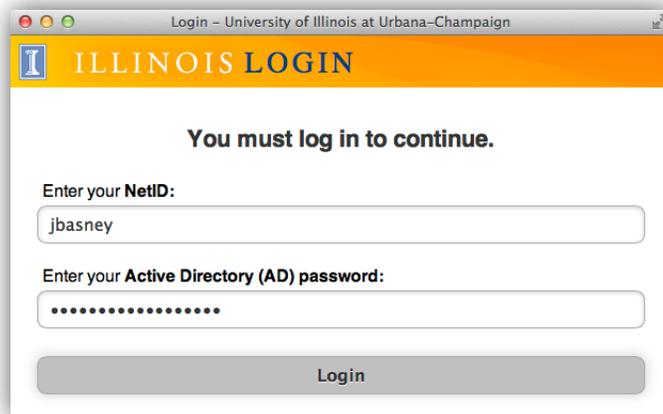
CILogon – <https://cilogon.org/>

- Provides personal digital certificates for access to cyberinfrastructure
- Uses federated authentication for user identification



Federated Authentication

- Log on to CILogon using your campus (InCommon) or Google (OpenID) account



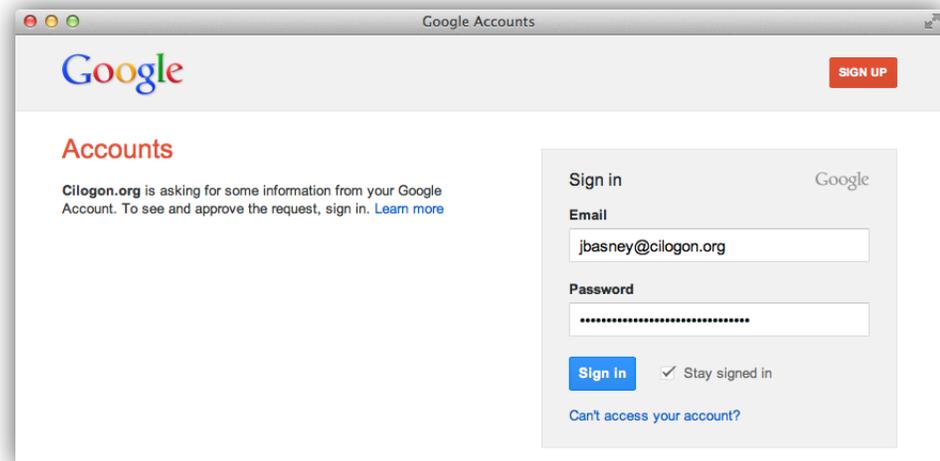
Login - University of Illinois at Urbana-Champaign

ILLINOIS LOGIN

You must log in to continue.

Enter your NetID:

Enter your Active Directory (AD) password:



Google Accounts

Google

Accounts

Cilogon.org is asking for some information from your Google Account. To see and approve the request, sign in. [Learn more](#)

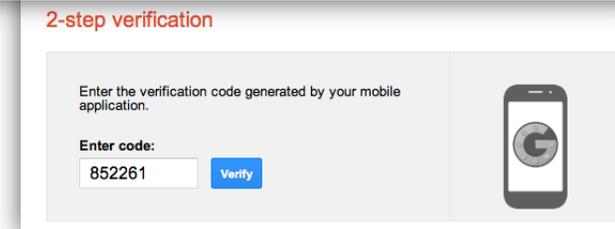
Sign in Google

Email

Password

Stay signed in

[Can't access your account?](#)



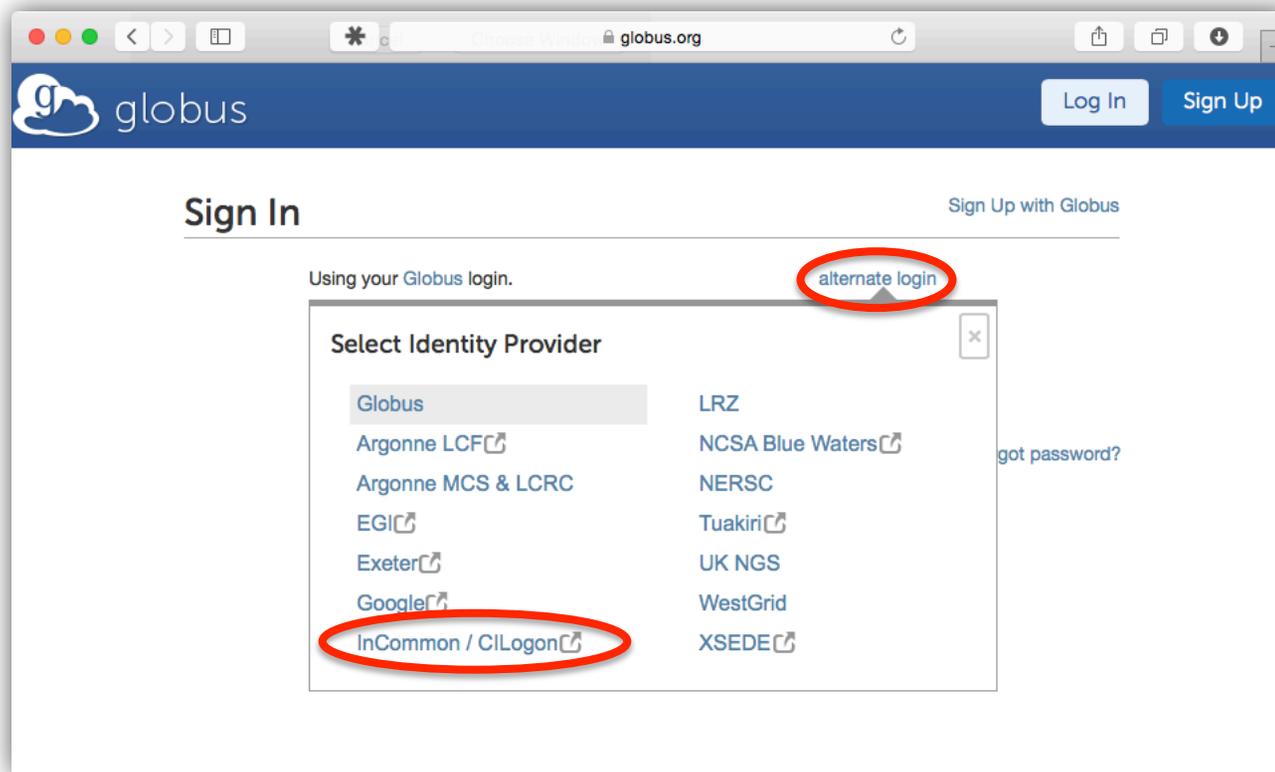
2-step verification

Enter the verification code generated by your mobile application.

Enter code:



Integrated with Globus



Integrated with XSEDE

XSEDE | USER PORTAL
Extreme Science and Engineering
Discovery Environment

Search XSEDE...

SIGN IN

MY XSEDE RESOURCES DOCUMENTATION ALLOCATIONS TRAINING USER FORUMS HELP ABOUT

Summary Allocations/Usage Accounts Jobs Profile Publications Tickets Change Password Add User Community Accounts SSH Terminal

Welcome to The XSEDE User Portal (XUP), the home on the web for XSEDE users! The XUP provides XSEDE users access to view and manage their accounts and allocations, as well as find information about and access the XSEDE services and resources.

Here's a few of the things you can do here without even logging in

- See XSEDE resource and service status
- View user news and upcoming events
- Find and register for training classes

Enter the Portal

USER NAME

PASSWORD

REMEMBER ME

CREATE ACCOUNT VERIFY ACCOUNT FORGOT PASSWORD FORGOT USERNAME

FEEDBACK

www.cilogon.org/xsede

Integrated with Campus

The image displays three overlapping browser windows illustrating campus integration for login:

- Top Window (cybergateway.uits.iu.edu):** Shows the Indiana University Cyberinfrastructure Gateway navigation menu. The **Login** link is circled in red.
- Middle Window (transfer.rcac.purdue.edu):** Shows the Purdue University Research Computing (RCAC) login page. The **Log In** link is circled in red. Below the header, a box states: "Access the Globus data transfer service by signing in with your Purdue Career Account". To the right, under "Sign In", the option "Using your InCommon / CILogon login." is circled in red, with a sub-link "alternate login" and the instruction "Click PROCEED to authenticate with InCommon / CILogon." and a "Proceed" button.
- Bottom Window (portal.duke.ci-connect.net):** Shows the Duke University CI CONNECT login page. The "Sign In" section includes a message: "This client is requesting access to your account. Site: https://duke.ci-connect.net/oauth. If you approve, please sign in." Below this, the option "Using your InCommon / CILogon login." is circled in red, with a sub-link "alternate login" and the instruction "Click PROCEED to authenticate with InCommon / CILogon." and a "Proceed" button.

Bridging InCommon and IGTF

- Translating mechanism and policy across higher education and grid trust federations

InCommon is operated by Internet2

InCommon About Participants Join InCommon

Home Federation Certificates Assurance Multifactor

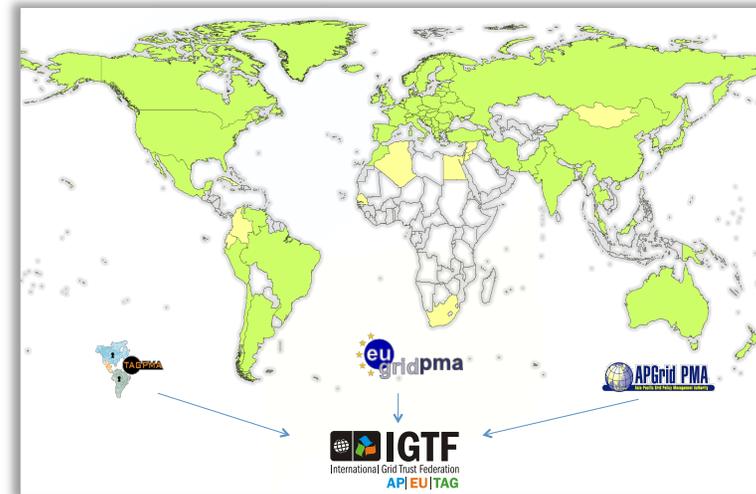
Current InCommon Participants

Below is a complete list of InCommon Participants. There are also lists available for:

- Identity and Service Providers deployed in the federation (and other metadata-driven pages)
- Certificate Service subscribers
- Duo Security multifactor service subscribers

The ISP and SP pages include links to more-detailed information on each entry—just go to the ISP or SP list and click on the name of the ISP or SP you are interested in. InCommon serves 8 million end-users through federated identity management (IFESIS data, October 2014)

Higher Education Participants (473)	Government and Nonprofit Laboratories, Research Centers, and Agencies (30)	Sponsored Partners (209)
A. T. Still University	Ames Laboratory	12Twenty Inc.
Adventist University of Health Sciences	Argonne National Laboratory	9STAR
Alma Community College	Brookhaven National Laboratory	Aastra USA
Allegheny College	ESnet	Academic Works, Inc.
American University	Fermilab	Acatar
American University of Beirut	GENI Project Office	Accessible Information Management, LLC
American University of Sharjah	Idaho National Laboratory	Active Network
Amherst College	Internet2	Advantage Connect Pro Inc.
Arizona State University	Jefferson Lab	AEFIS
Arkansas State University	Lawrence Berkeley National Laboratory	ALEKS Corporation
Auburn University	LIGO Scientific Collaboration	Alexander Street Press
Augsburg College	LTERN (Long Term Ecological Research Network)	AliveTek
Azusa Pacific University	Marine Biological Laboratory	American Chemical Society
Ball State University	NERSC (National Energy Scientific Computing Center)	AppointLink Portal Solutions, Inc.
Barry University	Oak Ridge National Laboratory	ARTutor
Bates College	Open Cloud Consortium (OCC)	Association for Computing Machinery
Bay De Noc Community College	Open Science Grid	AT&T Services
Baylor College of Medicine	Pacific Northwest National Laboratory	AthenaOnline.com
Baylor University	Sandia National Labs	Atlas Systems, Inc.
Beaufort County Community College	SLAC National Accelerator Laboratory	Atomic Learning
Berklee College of Music	Smithsonian Institution	Axiom Education
Binghamton University	The Broad Institute of MIT and Harvard	Benelagic
Blinn College	The FDP Foundation	BioOne, Inc.
Bloomsburg University of Pennsylvania	The MITRE Corporation	BioRAFT
Bob Jones University	The Translational Genomics Research	Blackboard, Inc.
Boise State University		Blatant Media Corporation



100+ InCommon Research and Scholarship Identity Providers

Arizona State University
Boston University
Brookhaven National Laboratory
Brown University
California Institute of Technology
California State Polytechnic University, Pomona
California State University, Fresno
California State University, Fullerton
Carleton College
Carnegie Mellon University
Clemson University
Colorado School of Mines
Colorado State University
Columbia University
Cornell University
Florida International University
George Mason University
Georgia Institute of Technology
GPN (Great Plains Network)
Indiana University
Indiana University of Pennsylvania
Internet2
Iowa State University
Johns Hopkins
Kansas State University
Lawrence Berkeley National Laboratory
Lehigh University
LIGO Scientific Collaboration
Louisiana State University
LTERN (Long Term Ecological Research Network)
Massachusetts Institute of Technology
Montana State University - Bozeman
New York University
North Carolina State University
Northwestern University

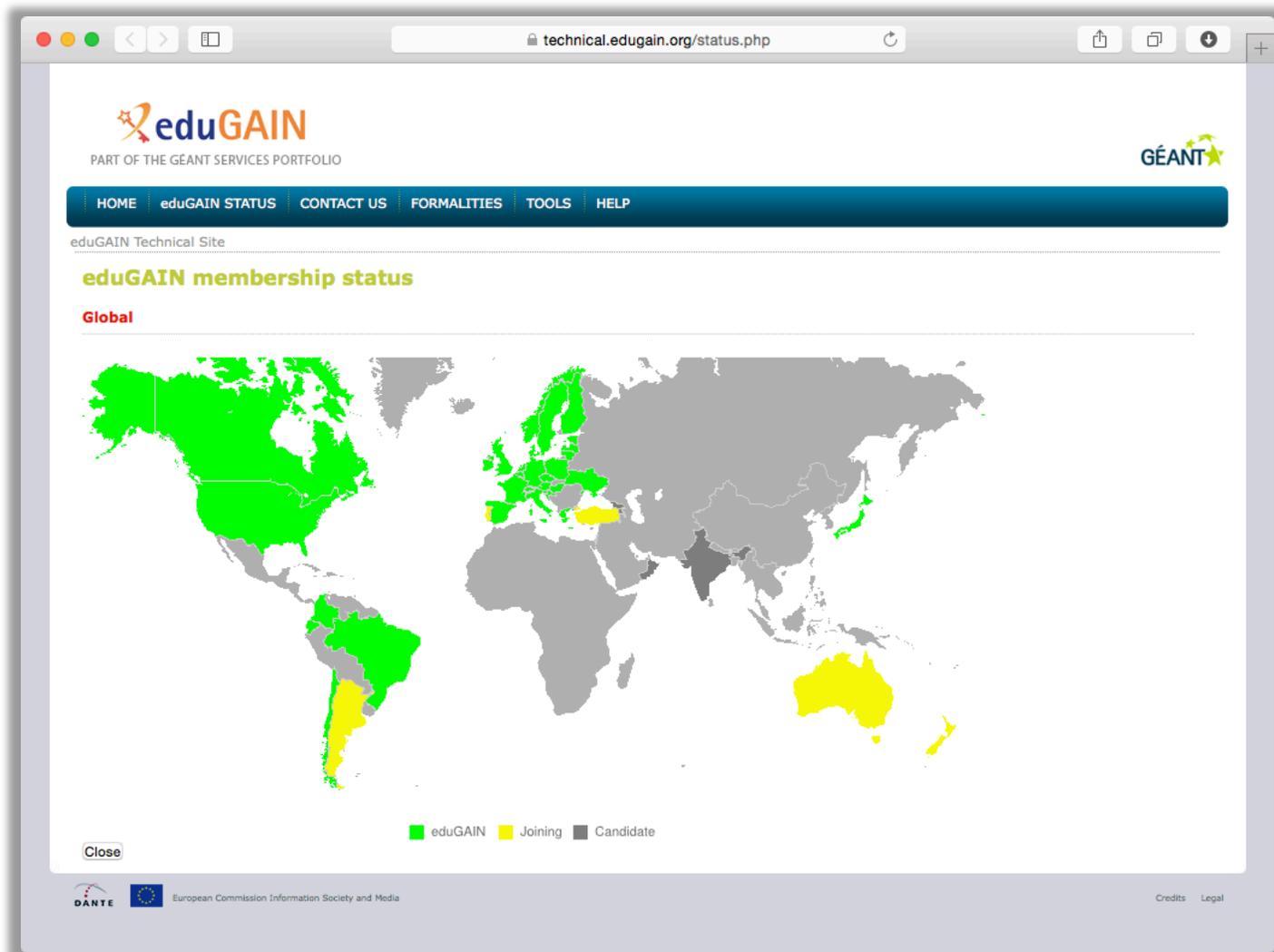
Ohio State University
Ohio Technology Consortium (OH-TECH)
Oregon State University
Pomona College
Purdue University Main Campus
Reed College
Rice University
Rockefeller University
Rutgers, The State University of New Jersey
San Diego State University
Southern Illinois University
Southern Methodist University
Stevens Institute of Technology
Stony Brook University
Syracuse University
Texas A & M University
The University of Arizona
Towson University
Tufts University
University At Albany, State University of New York
University of Alabama at Birmingham
University of Alaska Statewide System
University of Arkansas
University of California, Davis
University of California, San Francisco
University of California, Santa Cruz
University of California-Irvine
University of California-Los Angeles
University of Central Florida
University of Chicago
University of Cincinnati Main Campus
University of Colorado at Boulder
University of Dayton
University of Florida
University of Hawaii

University of Houston Libraries
University of Illinois at Chicago
University of Illinois At Springfield
University of Illinois at Urbana-Champaign
University of Iowa
University of Kansas
University of Maryland Baltimore
University of Maryland Baltimore County
University of Maryland College Park
University of Massachusetts Amherst
University of Michigan
University of Minnesota
University of Missouri System
University of Nebraska-Lincoln
University of North Carolina at Chapel Hill
University of Oregon
University of Pennsylvania
University of Pittsburgh
University of South Florida
University of Southern California
University of Utah
University of Vermont
University of Virginia
University of Washington
University of Wisconsin-Madison
University of Wisconsin-Milwaukee
Utah State University
Utah Valley University
Vanderbilt University
Virginia Polytechnic Institute and State University
Weill Cornell Medical College
West Virginia University
Western Michigan University
Wheaton College (MA)
Yale University

id.incommon.org/category/research-and-scholarship



International Federation: eduGAIN



International R&S: REFEDS



The screenshot shows a web browser window displaying the REFEDS website. The browser's address bar shows the URL `refeds.org/category/research-and-scholarship/`. The page features the REFEDS logo (a red and white stylized globe) and the text "REFEDS". Below the logo is a photograph of a group of people in a meeting. The main content area is titled "REFEDS Entity Category" and "Research and Scholarship". It states that this version 1.2 replaces 1.1 and was published on 28th November 2014. An "Overview" section explains that Research and Education Federations are invited to use the REFEDS Research and Scholarship Entity Category with their members to support the release of attributes to Service Providers meeting the requirements described below. It also mentions that an implementation guide for federations will be made available shortly. A section on key words ("MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL") is included, stating that this definition is written in compliance with the Entity Category SAML Entity Metadata Attribute Types specification [EntityCatTypes]. An FAQ for the Entity Category has been made available to help deployments [R&SFAQ]. The "1. Definition" section states that candidates for the Research and Scholarship (R&S) Category are Service Providers that are operated for the purpose of supporting research and scholarship interaction, collaboration or management, at least in part. A sidebar on the left contains navigation links: Home, About Us, Our Work, News, Resources, FAQ, Contact Us, and Blog. Below these links is a search box and a link to the License and Terms of use.

REFEDS

REFEDS Entity Category

Research and Scholarship

This version 1.2 replaces 1.1
published 28th November 2014.

Overview

Research and Education Federations are invited to use the REFEDS Research and Scholarship Entity Category with their members to support the release of attributes to Service Providers meeting the requirements described below. An implementation guide for federations will be made available shortly.

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 [RFC2119]. This definition is written in compliance with the Entity Category SAML Entity Metadata Attribute Types specification [EntityCatTypes].

An FAQ for the Entity Category has been made available to help deployments [R&SFAQ].

1. Definition

Candidates for the Research and Scholarship (R&S) Category are Service Providers that are operated for the purpose of supporting research and scholarship interaction, collaboration or management, at least in part.

Home Work Areas

About Us White papers

Our Work Meetings

News Services

Resources Documents

FAQ

Contact Us

Blog

Searching

License and Terms of use

Multiple Levels of Assurance

- CILogon Silver CA
 - InCommon Silver IDs
 - IGTF accredited February 2011
- CILogon Basic CA
 - “Basic” InCommon IDs
 - IGTF accredited June 2014
- Google Authenticator provides second authentication factor



The screenshot shows a web browser window titled 'Google Authenticator Login'. The page header features the CILogon Service logo, which consists of a green circular arrow icon and the text 'CILogon Service'. Below the header, the main heading is 'Google Authenticator Login'. A message states: 'Your account has been configured to use Google Authenticator as a second authentication factor. Enter a one-time passcode as generated by the app below.' The form contains the following fields: 'Account: A534@cilogon.org', 'Passcode: 177799' (with a text input field), and an 'Enter' button. At the bottom, there is a link: 'Don't have your phone with you?'.

InCommon IGTF Server CA

The screenshot shows a web browser window with the URL www.incommon.org/cert/igtf/. The page features the InCommon logo and navigation links for 'About', 'Participants', and 'Join InCommon'. A search bar is also present. Below the navigation, there are buttons for 'Home', 'Federation', 'Certificates', 'Assurance', and 'Multifactor'. The 'Certificates' button is highlighted with a green arrow. The main content area is titled 'IGTF Server Certificates' and includes a 'Subscribe' link, a 'Need Help?' section with various links (Certificate Manager Login, Password Reset, Changing Exec/RAO, Documentation and Resources, Choosing the Right Type of Certificate, Client Certificates, Code Signing Certificates, Extended Validation (EV) Certificates, IGTF Server Certificates, Subscribers, and FAQ), and a detailed section about IGTF Server Certificates. This section states that InCommon offers IGTF server certificates for use by InCommon Certificate Service Subscribers who are also active with the IGTF grid community. It includes a note that these certificates are not for servers running as part of the IGTF grid. Below this, there are sections for 'IGTF Certificate Bundles' (IGTF CA Bundle and IGTF CA Bundle Reversed) and 'IGTF Certificate Documents' (IGTF Certificate Practices Statement (CPS) [PDF], SSL Subscriber Agreement [Word], SSL Relying Party Agreement [PDF], InCommon Certificate Service Policy Authority [PDF], and InCommon IGTF SSL CA and Certificate Profiles [Word]). At the bottom, it provides the CRL URL (<http://crl.incommon-igtf.org/InCommonIGTFServerCA.crl>), the official contact email address (admin@incommon.org), and other contract information including a postal address (<https://www.incommon.org/contacts>).

InCommon is operated by Internet2

InCommon®

About Participants Join InCommon

Home Federation Certificates Assurance Multifactor

Certificates

Subscribe

Need Help?

- Certificate Manager Login
- Password Reset
- Changing Exec/RAO
- Documentation and Resources
- Choosing the Right Type of Certificate
- Client Certificates
- Code Signing Certificates
- Extended Validation (EV) Certificates
- IGTF Server Certificates
- Subscribers
- FAQ

IGTF Server Certificates

At the request of the community, InCommon is pleased to now offer IGTF server certificates for use by InCommon Certificate Service Subscribers who are also active with the IGTF grid community.

Note: Unless you are running a server as part of the IGTF grid ([see the IGTF website](#)) these certificates are NOT what you need. Request a normal InCommon server certificate instead.

IGTF Certificate Bundles

- IGTF CA Bundle
- IGTF CA Bundle Reversed

IGTF Certificate Documents

- IGTF Certificate Practices Statement (CPS) [PDF]
- SSL Subscriber Agreement [Word]
- SSL Relying Party Agreement [PDF]
- InCommon Certificate Service Policy Authority [PDF]
- InCommon IGTF SSL CA and Certificate Profiles [Word]

CRL URL: <http://crl.incommon-igtf.org/InCommonIGTFServerCA.crl>

Official contact email address: admin@incommon.org

Other contract information (including postal address): <https://www.incommon.org/contacts>

Security Updates

SHA-1



SHA-2

SSL



TLS

OAuth 1.0



OAuth 2.0

OpenID 2.0



OpenID Connect



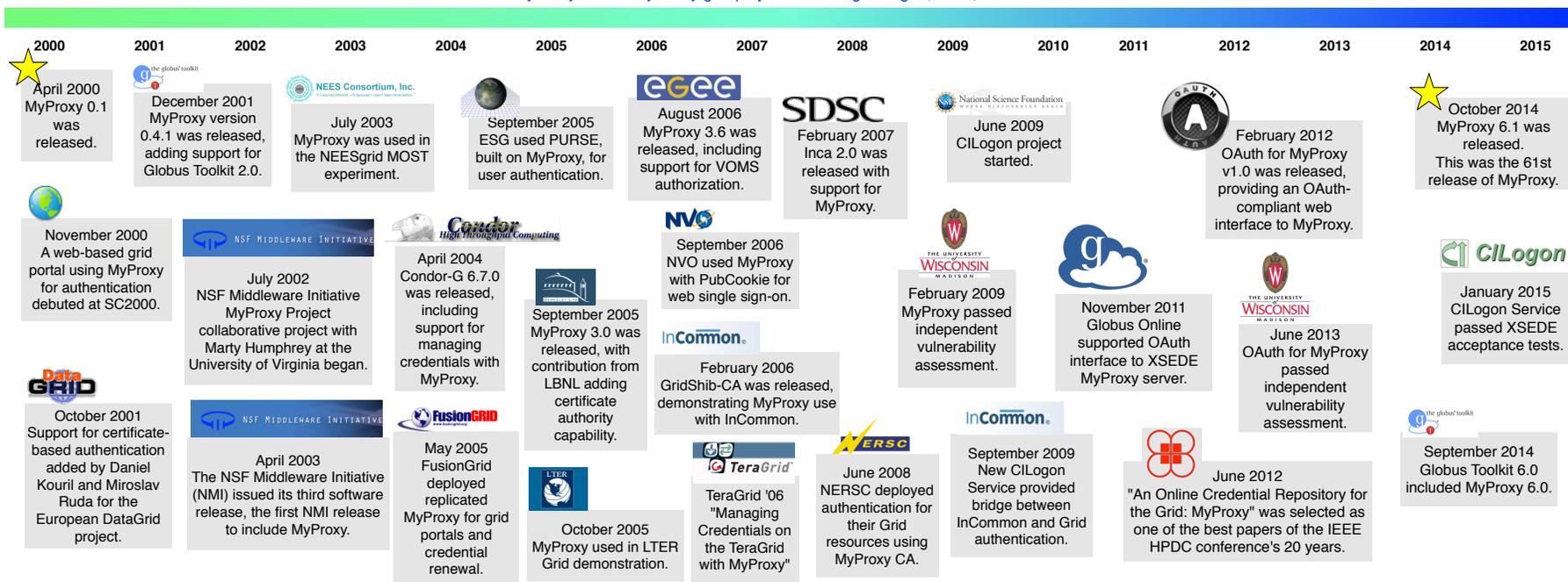
MyProxy

Credential Management Service



FIFTEEN YEARS OF SECURING CYBERINFRASTRUCTURE

MyProxy is part of the Globus Toolkit and is included in Fedora and Debian Linux operating system package repositories. MyProxy is used by many grid projects including CILogon, OSG, and XSEDE.



Core MyProxy Team at NCSA (current and past):

- Jim Basney (lead)
- Bill Baker
- Randy Butler
- Shiva Shankar Chetan
- Patrick Duda
- Mike Freemon
- Terry Fleury
- Zhenmin Li
- Jason Novotny
- Venkat Yekkirala
- Von Welch

MyProxy was funded primarily by:

National Science Foundation
WHERE DISCOVERIES BEGIN

via
NLANR
NSF Middleware Initiative
NCSA Core Award
TeraGrid
STCI

MyProxy Community Collaborators and Contributors:

- Jarek Gawor (ANL)
- Monte Goode (LBNL)
- Marty Humphrey (UVA)
- Daniel Kouril (CESNET, CZ)
- Alexandre Lossent (CERN)
- Neill Miller (ANL)
- Miroslav Ruda (CESNET/EGEE)
- Steve Traylen (CERN/EGEE)
- Benjamin Temko (IU)
- Steven Tuecke (ANL)
- Naotaka Yamamoto (AIST)

Thanks!

jbasney@ncsa.illinois.edu

[@JimBasney](#)

