



Identity Management Challenges Middleware And Grid Interagency Coordination

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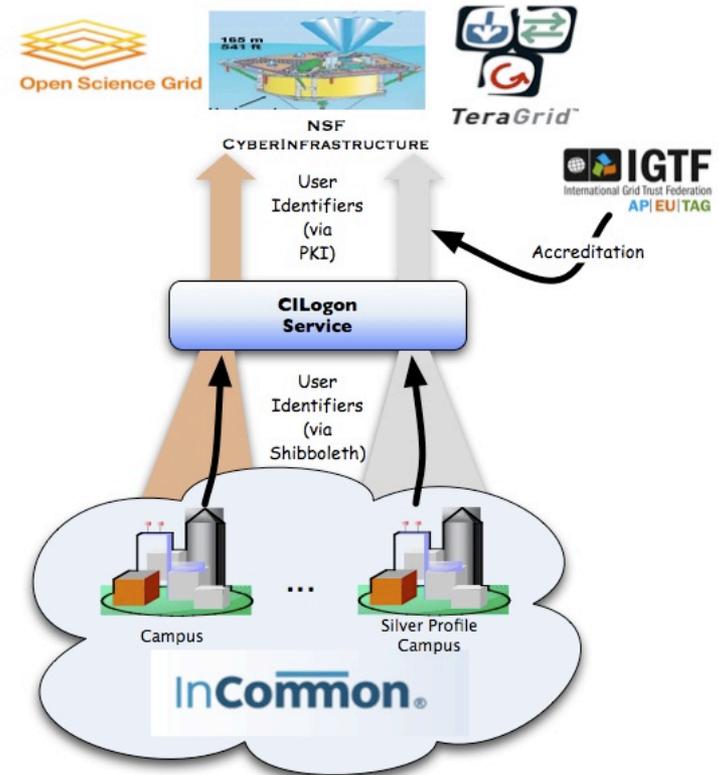
Presentation Topics

- What problem space does CILogon address?
- What identity management issues are not addressed by CILogon?



CILogon Project Goal

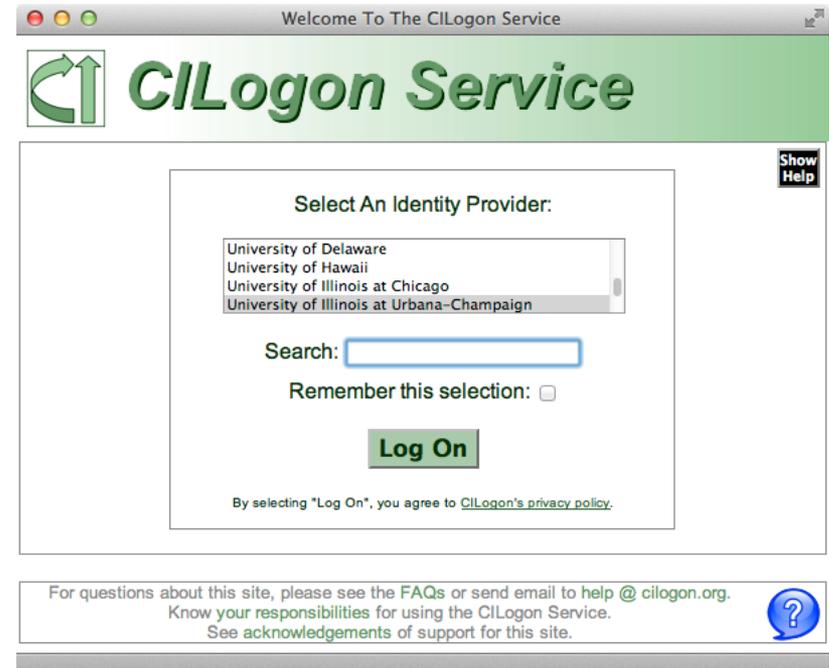
- Enable campus logon to CyberInfrastructure (CI)
 - Use researchers' existing security credentials at their home institution
 - Ease credential management for researchers and CI providers



CILogon Service

(<https://cilogon.org>)

- Supports InCommon and OpenID authentication
- Delivers certificates to desktop, browser, and portals
- Available certificate lifetimes: from 1 hour to 13 months
- Supports close integration with CI projects
- Available now!
- See also:
 - <http://www.cilogon.org/faq>
 - <http://www.cilogon.org/news>
 - <http://ca.cilogon.org>



Welcome To The CILogon Service

CILogon Service

Select An Identity Provider:

University of Delaware
University of Hawaii
University of Illinois at Chicago
University of Illinois at Urbana-Champaign

Search:

Remember this selection:

Log On

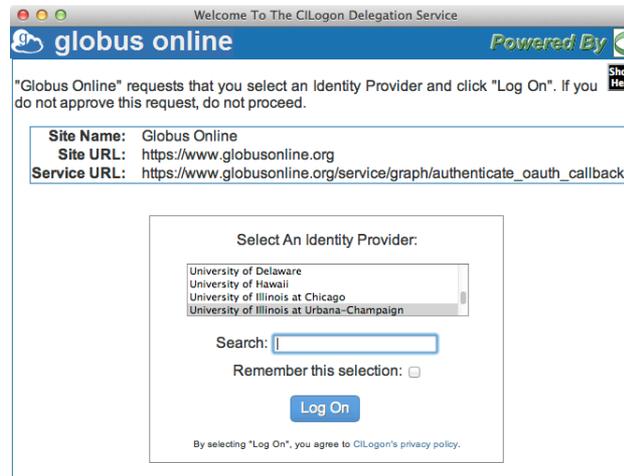
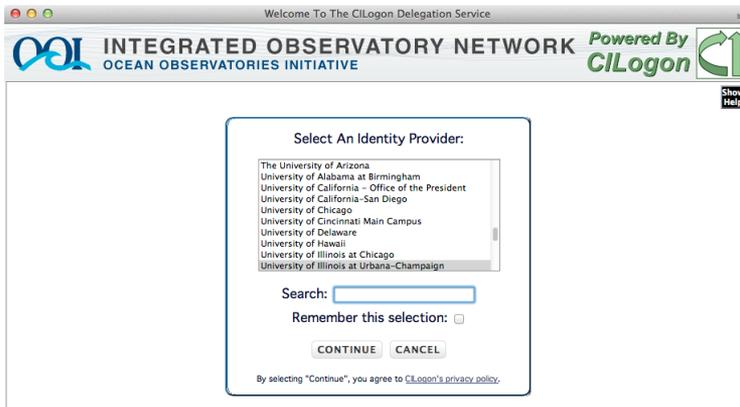
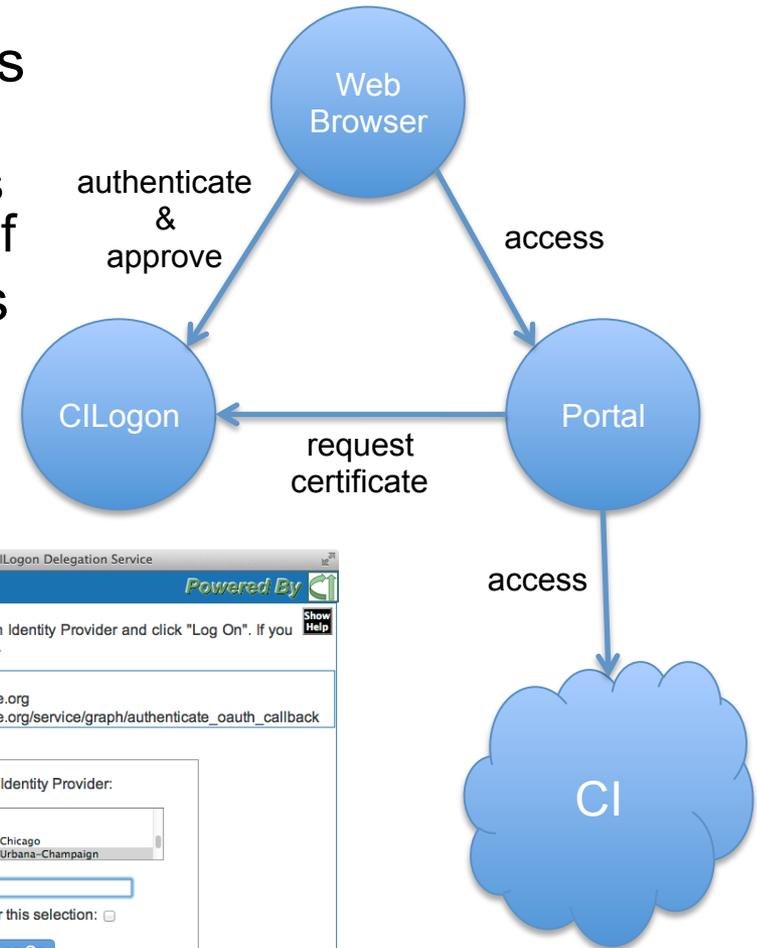
By selecting "Log On", you agree to [CILogon's privacy policy](#).

Show Help

For questions about this site, please see the [FAQs](#) or send email to help@cilogon.org.
Know your responsibilities for using the CILogon Service.
See acknowledgements of support for this site.

CILogon Portal Delegation

- Grid Portals and Science Gateways provide web interfaces to CI
 - Portals/Gateways need certificates to access CI on researchers' behalf
- CILogon Delegation Service allows researchers to approve certificate issuance to portals (via **OAuth**)
- www.cilogon.org/portal-delegation



Levels of Assurance

- LOA requirements differ across scientific collaborations
 - 2-factor authentication
 - IGTF accreditation
 - Open access with usage reporting
- CILogon LOA options:
 - InCommon Silver: US Gov't ICAM Level 2
 - OpenID OIX: US Gov't ICAM Level 1
 - InCommon “Basic”
 - 2nd factor authentication (coming soon)



Adding a 2nd Factor

Google Authenticator Registration

Step 1

Download the Google Authenticator app specific to your device.

- [Android OS \(2.1 and higher\) \(QR Code Link\)](#)
- [Apple iOS \(3.1.3 and higher\) \(QR Code Link\)](#)
- [BlackBerry OS \(4.5-6.0\) \(QR Code Link\)](#)

Step 2

Launch the Google Authenticator app and add your token by scanning the QR code or by entering the account information shown below.



Account Name: A534@cilogon.org
Key: R63YPJNYDWB3KTH
Type of Key: Time based

Step 3

Click the "Verify" button to log in with a one-time password generated by the Google Authenticator app.

Verify

Google Authenticator Login

Google Authenticator Login

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.

Account: A534@cilogon.org

Passcode:

Enter

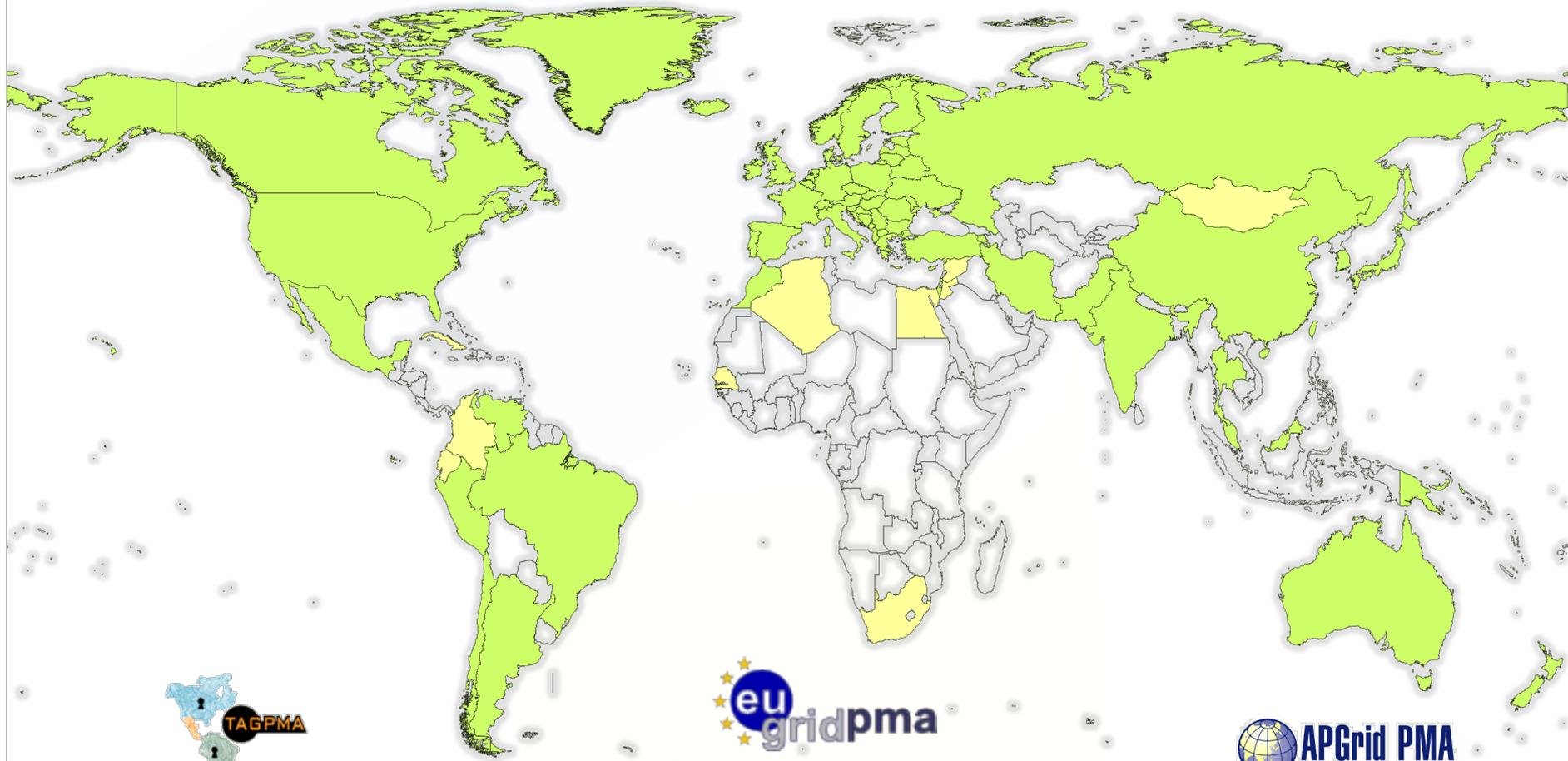
[Don't have your phone with you?](#)

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CILogon and IGTF



- CILogon CA operations, key management, and certificate profiles meet IGTF standards
- Issue: subscriber ID vetting & authentication
 - Goal: rely on campuses for this
 - Need minimum standards for campus practices
 - Approach: rely on InCommon Identity Assurance
- Status:
 - CILogon Silver CA accredited (October 2010)
 - Virginia Tech certified InCommon Silver (October 2012)
 - Virginia Tech members use CILogon Silver certificates to access Open Science Grid services (October 2012)
 - CILogon Basic & OpenID CAs being actively used w/o IGTF accreditation



Support for Non-Browser Apps

- Option #1:
 - Use browser-based authentication (SAML, OpenID)
 - Get URL for certificate download (wget/curl)
 - Or use Java Web Start, etc.
 - Use certificate for non-browser authentication
 - *Still requires a browser for initial authentication*
- Option #2
 - Use SAML Enhanced Client or Proxy (ECP) authentication *outside the browser* to download certificate
 - ECP adoption by InCommon campuses beginning
 - Successfully tested with U Washington, U Chicago, U Wisconsin-Madison, LIGO, LTER, and ProtectNetwork
 - For more info: <http://www.cilogon.org/ecp>

ECP Example

```
$ curl -sSO https://cilogon.org/ecp.pl
```

```
$ perl ecp.pl --get cert -c create -k userkey.pem -o usercert.pem -t 12
```

```
Select an Identity Provider (IdP):
```

```
1> LTER Network
```

```
2> ProtectNetwork
```

```
3> University of Chicago
```

```
4> University of Washington
```

```
5> Specify the URL of another IdP
```

```
Choose [2]: 2
```

```
Enter a username for the Identity Provider: jbasney
```

```
Enter a password for the Identity Provider: *****
```

```
$ grid-proxy-init -cert usercert.pem -key userkey.pem -hours 4
```

```
Your identity: /DC=org/DC=cilogon/C=US/O=ProtectNetwork/CN=Jim Basney A685
```

```
Creating proxy ..... Done
```

```
$ gsissh citest.example.edu
```

```
[jbasney@citest ~]$
```

Lessons Learned

- InCommon today supports **browser SSO**
 - SAML->X.509 bridges are common for non-web apps (CILogon, TERENA Certificate Service, etc.)
 - SAML ECP adopted by ~5 InCommon IdPs so far (<http://www.cilogon.org/ecp>)
- Attribute release is a challenge today for SPs that want to support many IdPs
 - New InCommon effort is addressing this challenge: <https://spaces.internet2.edu/display/InCCollaborate/Research+and+Scholarship+Category>
- Google OpenID is a popular “catch-all” IdP
 - US ICAM LOA 1 certified (<http://openidexchange.org/certified-providers>)

Out of Scope for CILogon

(CILogon depends on others to address these issues)

- Initial identity vetting
- Linking multiple identities
- Name, email address, and IdP changes
- Authorization
- Group memberships
- Roles
- Credentialing users outside USA

Thanks!

For more information:

www.cilogon.org

info@cilogon.org