CILogon

Identity Management Challenges Middleware And Grid Interagency Coordination

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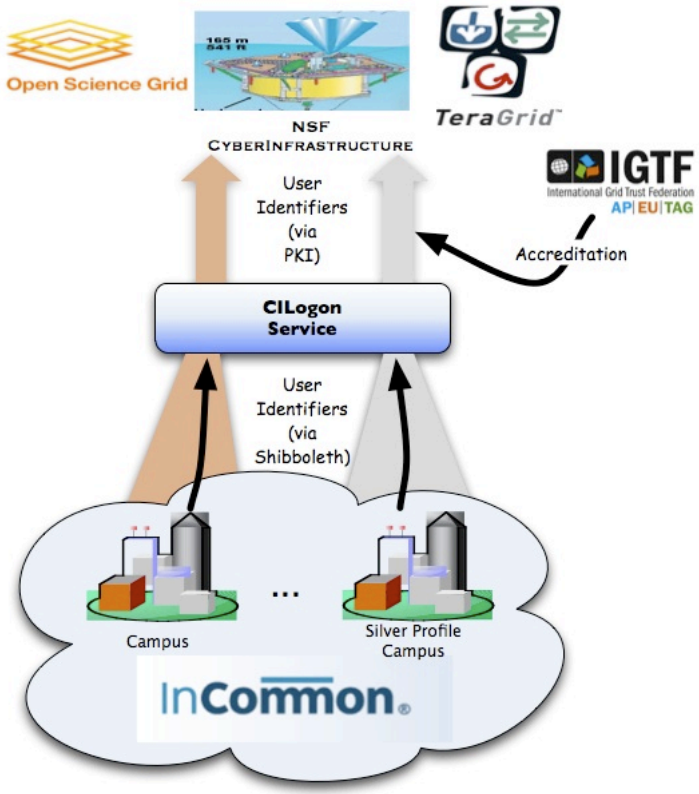
Presentation Topics

- 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:

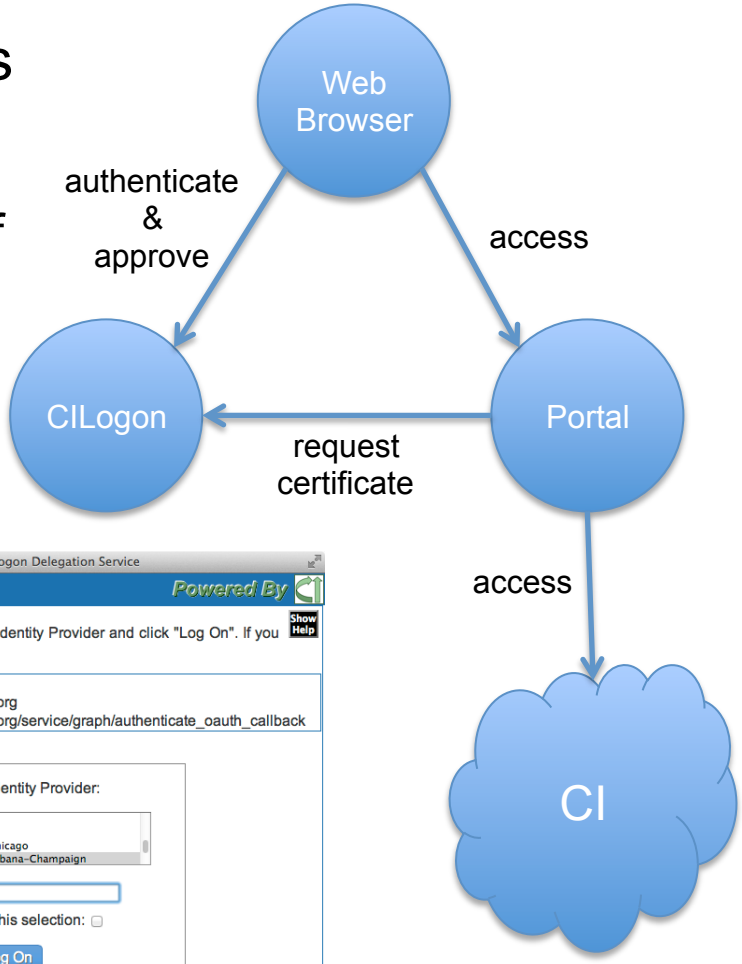
  http://www.cilogon.org/faq

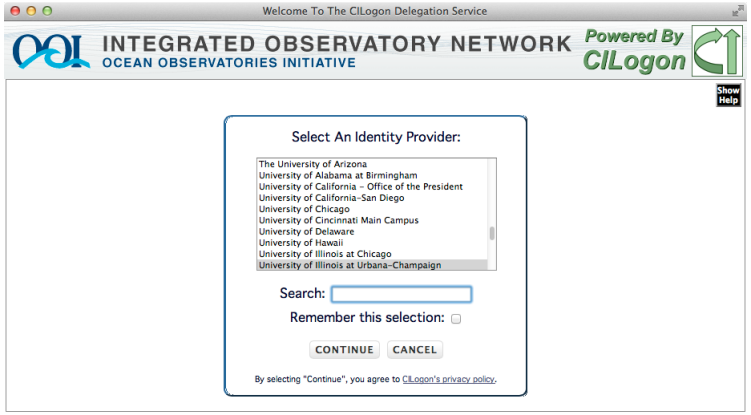
  http://www.cilogon.org/news

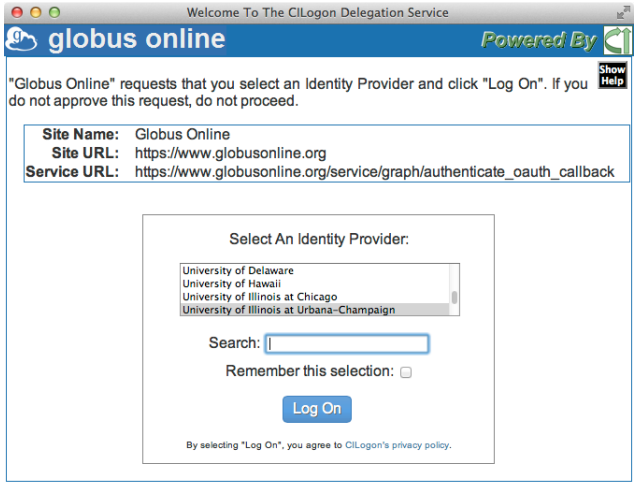
  http://ca.cilogon.org

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

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: R63YPJNYDWVB3KTH
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

CILogon Service

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: 177799

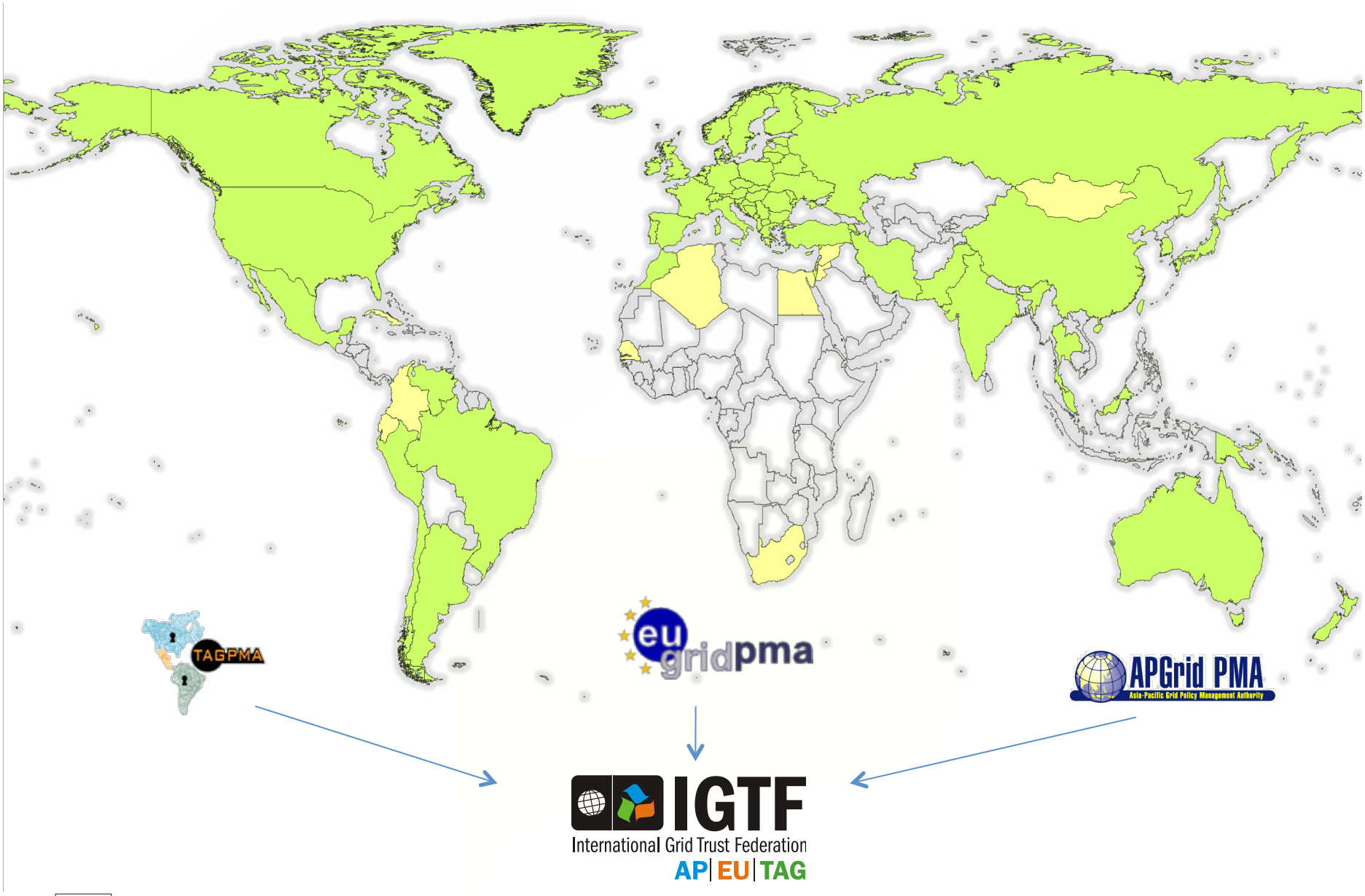
Enter

Don't have your phone with you?

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 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


TAGPMA
eugridpma
APGrid PMA
Asia-Pacific Grid Policy Management Authority
IGTF
International Grid Trust Federation
AP | EU | TAG

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://openidentityexchange.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