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CILogon Goal

• Facilitate campus logon to CI
  – Leverage researchers’ existing credentials at their home institution
  – Ease credential management for researchers and CI providers

• Bridge from:
  – Credentials issued by InCommon Federation members using SAML web browser single sign-on

• Bridge to:
  – X.509 certificates that satisfy the requirements of CI projects

CILogon

www.cilogon.org
Initial Success: go.teragrid.org

- Campus login to TeraGrid
- 31 campuses so far (including all CIC schools)
- In production since September 2009
- 1000+ certificates issued so far to 65+ users
- Integration with portal.teragrid.org underway
- IDtrust 2010 paper: “Federated Login to TeraGrid” (http://middleware.internet2.edu/idtrust/2010/)
New Service: cilogon.org

- No TeraGrid account required
- Delivers certificates to desktop or browser
- Available certificate lifetimes: from 1 hour to 13 months
- 3 Certification Authorities:
  - Silver: InCommon Silver IDs
  - Basic: any InCommon IDs
  - OpenID: any OpenIDs
- Available now!
Why certificates?

• Command-line interfaces, non-web apps
• Multi-stage, unattended batch workflows
• Significant worldwide CI investment in PKI
  – Software, operations, standards, etc.
International Grid Trust Federation

• Worldwide accreditation of grid CAs
  – Relying Parties: TeraGrid, Open Science Grid, European Grid Infrastructure, Worldwide LHC Computing Grid, and others
  – Standards: CA operations, key management, subscriber identity vetting, certificate profiles

www.igft.net
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
  - Now waiting for InCommon Silver campuses…
  - CILogon Basic & OpenID CAs operating w/o IGTF accreditation
Challenges

• Identity Assurance: IGTF and InCommon Silver
• Identifiers
• Attribute Release
Identifiers

• We require globally-unique, persistent, non-reassigned identifiers
  – Ensure that each certificate subject is assigned to a unique individual
    • Also: issue multiple certificates with a consistent certificate subject to the same individual
  – Opaque identifiers are OK
  – Options:
    • eduPersonTargetedID (ePTID)
    • eduPersonPrincipalName (ePPN)
      – But ePPN may be reassigned
Attribute Release

• The “boarding process” challenge:
  – CI users are spread across many campuses
  – Often few CI users on each campus

• Each campus must approve release of attributes to cilogon.org / go.teragrid.org
  – CILogon needs ePTID/ePPN, mail, givenName and surname
  – Self-service sign-up: https://cilogon.org/secure/testidp/

• Excellent application for user consent based attribute release (uApprove)
Conclusions

• We’re leveraging campus credentials for access to cyberinfrastructure
  – SAML to PKI bridges: go.teragrid.org & cilogon.org

• Improvements underway
  – InCommon Identity Assurance
  – Consent-based attribute release (uApprove)
Thanks

For more information:

www.cilogon.org

info@cilogon.org