Context, Gaps and Challenges

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Topics

- InCommon
- International R&E Feds
- Gaps
  - Attribute infrastructure
  - Privacy infrastructure
  - VO IdM
  - Interfederation

InCommon today

- 290+universities, 450+total participants, growth continues rapid
- > 10 M users
- Traditional uses continue to grow:
    - Outsourced services, government applications, access to software, access to licensed content, etc.
- New uses bloom:
    - Access to wikis, shared services, cloud services, calendaring, command line apps, medical, etc.
- FICAM certified at LOA 1 and 2 (Bronze and Silver).
- Certificate services bind the InCommon trust policies to new applications, including signing, encryption, etc.

Growth

InCommon Entities, 2005-2012
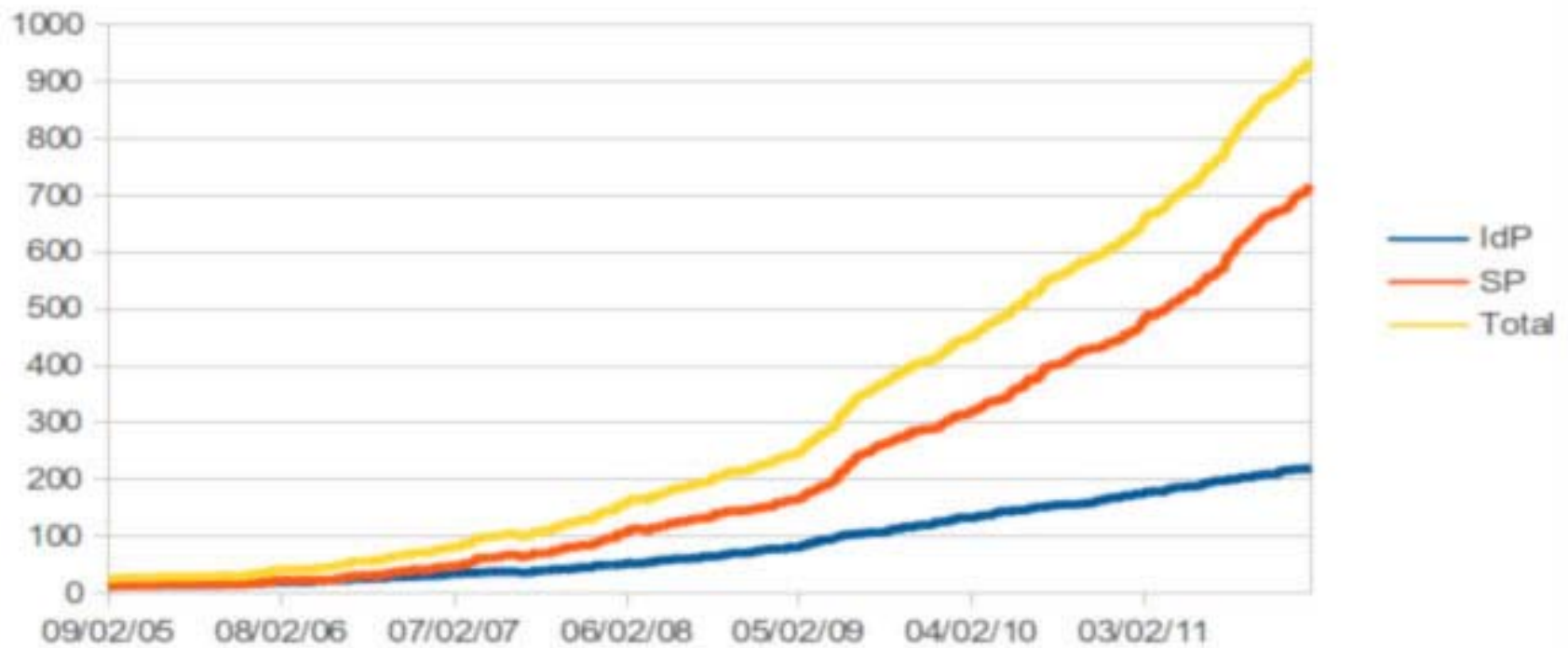
Types of services connected by InCommon

- R&E Centric
  - 300+ Universities providing services to students, staff, alumni, external users, K-12, etc.
  - NSF, NIH, National Supercomputing and DataBases, National Labs, GSA, Education, etc.
- With outsourced service providers
  - Travel management, Testing Services, HR systems, Loan providers, Parking management, NBCLearn, Elsevier, IEEE, ATT, Box, etc.
- With related business partners
  - Particularly health care – NIH, Mayo Clinic, UHC, VA
- With markets selling to students, etc.
  - Student Universe, UniversityTickets, National Student Clearinghouse, SAT's

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A typical enterprise-InCommon use profile

- All staff use it to get to the cloud and do their employee/payroll entry
- All students use it to take on-line class tests at the outsourced test service
- All academics use it to get to Elsevier journals, OCLC holdings, IEEE, etc
- Researchers use it to get to Grants.gov and Fastlane
- Researchers use it to get to CIlogon and use the Teragrid , Open Science grid, etc.
- Many researchers use it to get to the Clinical Trial wikis at NIH, PubMed, etc.
- Many collaborators and administrators use it to get shared wiki space at Internet2, Educause, the CIC, the UC system, the UT system…
- All students are using it for student tickets, software at Microsoft, etc

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International R&E federations

- \> 100M users across >30 countries
- Coverage in several countries is 100%, and extensive in many others.
- Generally part of the NREN but associated with another org or independent in a few
- Frequently linked to several government activities, in research, education, governance, health, etc.
- Some interfederation activities, including the Kalmar2 union and eduGAIN.
- www.refeds.org

R&E federations

Research and Education Identity Federations
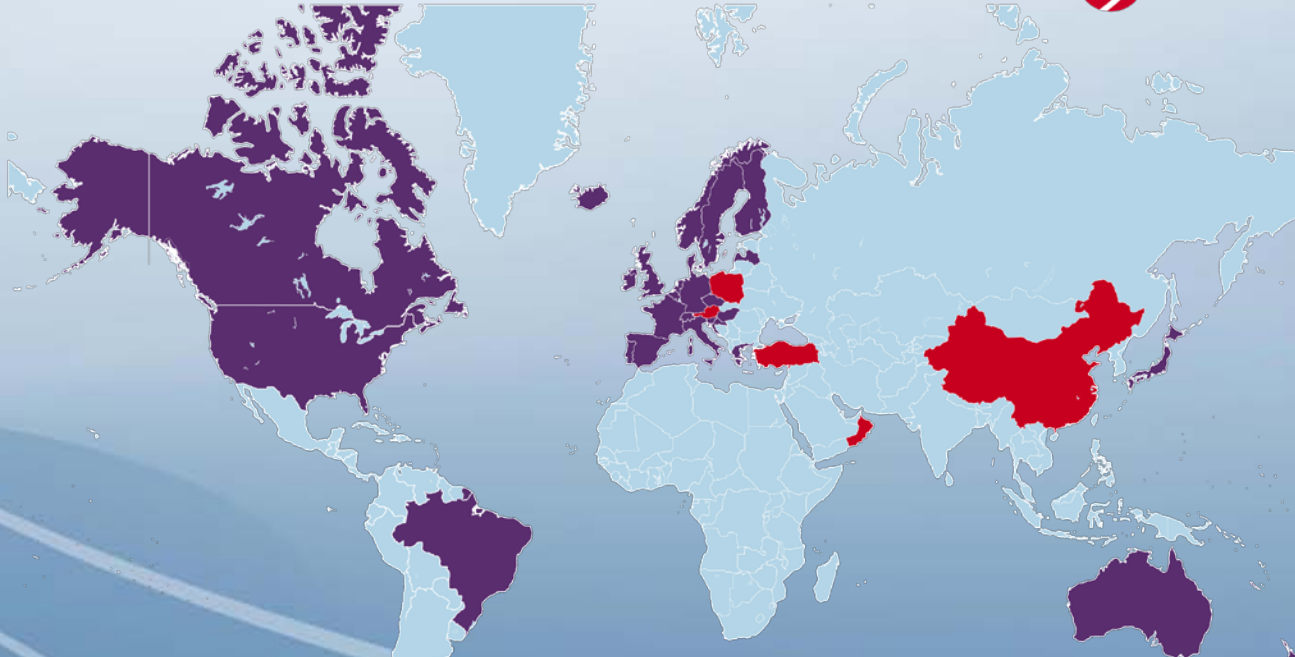
REFEDS

Identity Federations in production

AU	Australian Access Federation AAF	IE	Edugate
BE	Belnet R&E Federation	IT	IDEM
BR	CAFe	JP	GakuNin
CA	Canadian Access Federation CAF	LV	LAIFE
CH	SWITCHaai	NL	SURFfederatie
CZ	eduID.cz	NO	FEIDE
DE	DFN-AAI	NZ	Tuakiri New Zealand Access Federation
DK	WAYF	PT	RCTSaai
ES	SIR	SE	SWAMID
FI	Haka	SI	ArnesAAI Slovenska
FR	Fédération Éducation Recherche	UK	UK Access Management Federation
GR	GRNET		for Education and Research
HR	AAI@EduHr	US	InCommon
HU	eduID.hu	int	IGTF

Identity Federations in pilot

AT	ACOnet-AAI Federation
CN	CARSI
OM	OMAN_KID
PL	Poland Identity Federation
TR	ULAKAAI

This map is intended to provide a high-level overview
of countries with identity federations.

Last update: 15 April 2011

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Gap: Attribute Infrastructure

- Attribute registries
- Name space registries
- Good attribute design principles
- Attributes of attributes
- Attributes of things
- Quality of attributes
- Managing the marketplace
- UI

Gap: Privacy Infrastructure

- Small spanning set of attributes
  - Extensible but end-user manageable
  - Use of bundles to minimize complexity
- Rich metadata for trusted dialogue
  - Defaults, learning to minimize dialogues
- End user tools, some out of band
- Policies
  - App code of conduct, FOPP, InterfedOPP

VO IdM

- R&E calls them Virtual Organizations, corporations call them cross-industry project teams, governments call them multi-agency collaborations, non-profits call them home
- Do lots of authorization, largely by groups, and welcome federated authentication
- Represent an extremely important part of the ecosystem – pulsars of interrealm attributes
- Engineering them into the ecosystem solves a billion use cases…

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