AARC Authentication and Authorisation for Research and Collaboration

Can R&E federations trust Research Infrastructures?

The Snctfi policy/trust framework

David Kelsey (STFC-RAL)

Co-author: David Groep (Nikhef)

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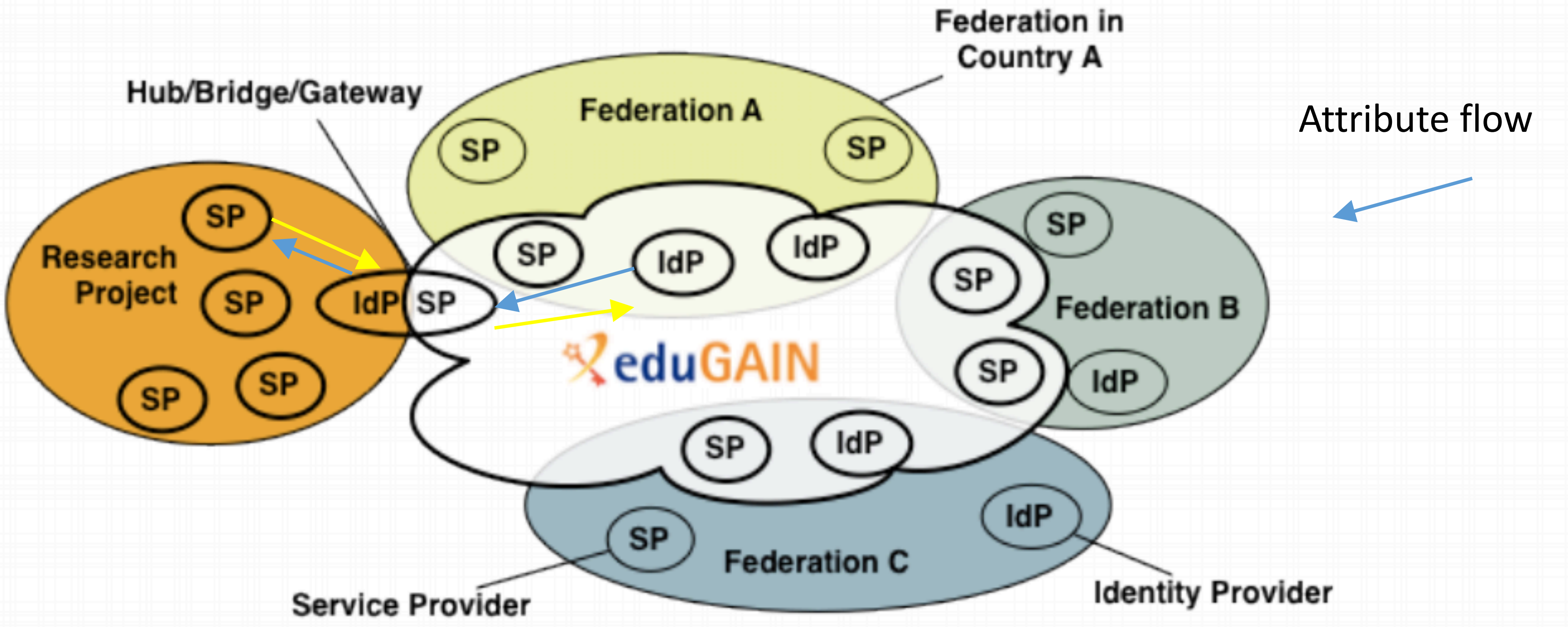
A classic FIM4R use case – “Research Communities and eduGAIN”

- A research community wants to use federated IdPs (eduGAIN)
- But they have **many** distributed research community SPs
  - And they do not all want to (or cannot) join a national identity federation
- A popular way of joining the two worlds together is via an SP/IdP Proxy
  - Acts as an SP in the eduGAIN world
  - Acts as an IdP for the research community
- But still have to establish trust between the eduGAIN IdPs and the research community
  - To allow attributes to flow
- How can we build scalable trust?

- > Snctfi

Flow of attributes and trust – via SP/IdP Proxy

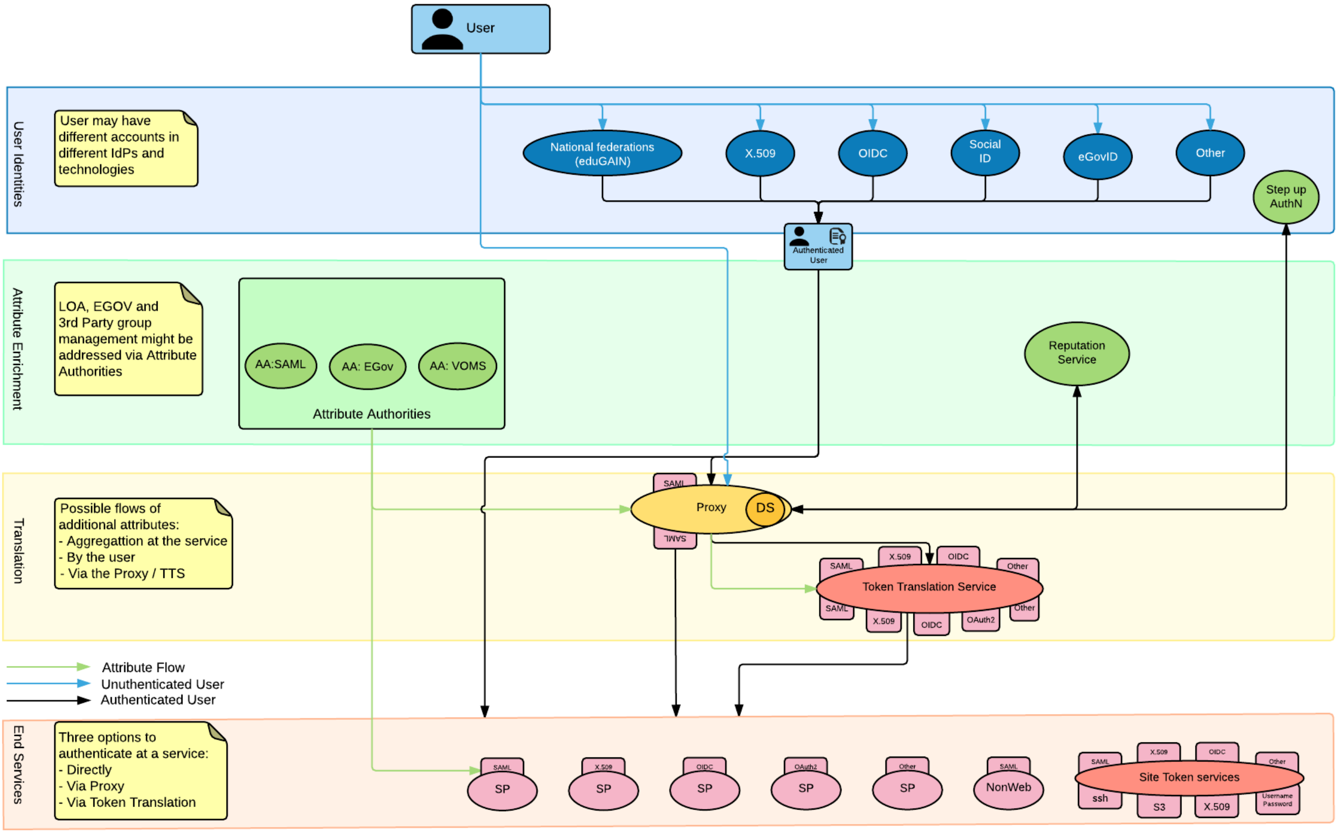
Picture from GEANT – eduGAIN



AARC Blueprint Architecture

AAI: The e-Infrastructure view

What is happening on top of existing Federation infrastructures today



User may have different accounts in different IdPs and technologies

LOA, EGOV and 3rd Party group management might be addressed via Attribute Authorities

Possible flows of additional attributes:
- Aggregattion at the service
- By the user
- Via the Proxy / TTS

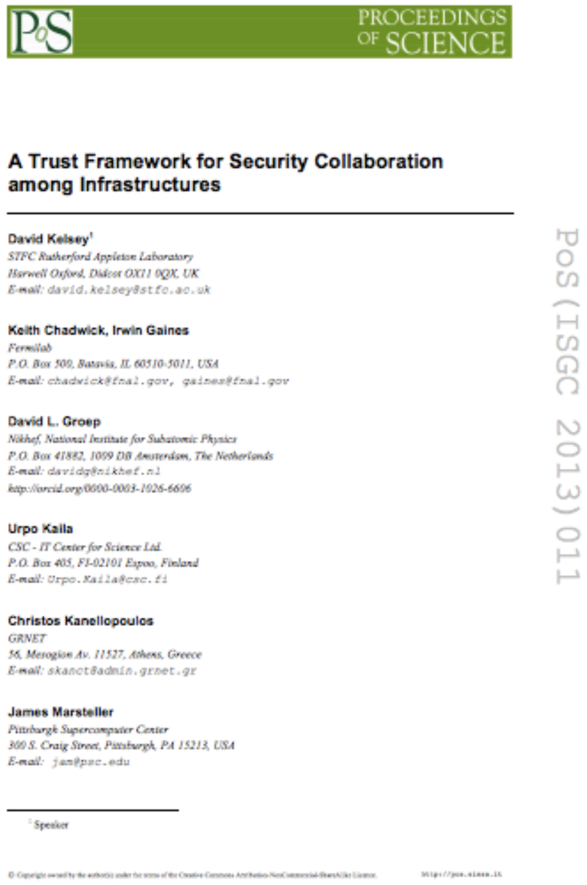
Attribute Flow
Unthenticated User
Authenticated User

Three options to authenticate at a service:
- Directly
- Via Proxy
- Via Token Translation

Infrastructure Policy and Trust Framework – requirements

- To establish trust between eduGAIN and the *Infrastructure* (research or e-Inf)
- A framework which binds all IdPs, SPs and AAs together (within the *Infrastructure*)
- Enable eduGAIN & the R&E federations to trust the SP-Proxy (and hence its community behind)
    - To allow/encourage the release of R&S attributes
- The federations only see the SP-Proxy
- Q: Why should the R&E federations trust that SP-Proxy?
- A: Because the SP-Proxy asserts categories and assurance marks
    - R&S
    - Sirtfi
    - Data Protection (CoCo)
- The new policy and trust framework
    - Constrains the behaviour of the *Infrastructure*
    - To allow the SP-Proxy to assert R&S, Sirtfi and DP CoCo on behalf of the *Infrastructure*

“Security Collaboration among Infrastructures” (SCI) – our starting point



PROCEEDINGS OF SCIENCE

A Trust Framework for Security Collaboration among Infrastructures

David Kelsey[1]
STFC Rutherford Appleton Laboratory
Harwell Oxford, Didcot OX11 0QX, UK
E-mail: david.kelsey@stfc.ac.uk

Keith Chadwick, Irwin Gaines
Fermilab
P.O. Box 500, Batavia, IL 60510-5011, USA
E-mail: chadwick@fnal.gov, gaines@fnal.gov

David L. Groep
Nikhef, National Institute for Subatomic Physics
P.O. Box 41882, 1009 DB Amsterdam, The Netherlands
E-mail: davidg@nikhef.nl
http://orcid.org/0000-0003-1026-6606

Urpo Kaila
CSC - IT Center for Science Ltd.
P.O. Box 405, FI-02101 Espoo, Finland
E-mail: Urpo.Kaila@csc.fi

Christos Kanellopoulos
GRNET
56, Mesogion Av. 11527, Athens, Greece
E-mail: skanct@admin.grnet.gr

James Marsteller
Pittsburgh Supercomputer Center
300 S. Craig Street, Pittsburgh, PA 15213, USA
E-mail: jam@psc.edu

[1] Speaker

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Http://pos.sissa.it/archive/conferences/179/011/ISGC%202013_011.pdf

- EGI, HBP, PRACE, EUDAT, CHAIN, WLCG, OSG and XSEDE
- Defined a policy trust framework
  - build trust and develop policy standards for collaboration on operational security
- SCI was used as the basis for ***Sirtfi***
  - ***A Security Incident Response Trust Framework for Federated Identity***
  - to enable coordination of security incident response across federated organizations

Why “Snctfi”?

Scalable Negotiator for a Community Trust framework in Federated Infrastructures

Snctfi

- As for “Sirtfi”
  - A meaningful acronym which is pronounceable
  - With no pre-existing hits in search engines

- “Sanctify” - meaning: make legitimate or binding
- Synonyms for “sanctify”:
  Approve, endorse, permit, allow, authorise, legitimise, “free from sin”

Snctfi - the new Trust and Policy Framework

- The target audience is the *Infrastructure* as a whole
- Scope: The SP-Proxy, the SPs, any AAs, token translators, credential stores, …
- Allow for different binding mechanisms, including contracts, MoUs, SLAs, or policies
- Build Trust between the *Infrastructure* and eduGAIN
  - And between *Infrastructures*
- This is not a REFEDS entity category
  - Rather an assurance mark
- Started from SCI document V1
- Added new policy requirements
  - E.g. behaviour of the SP-Proxy and Attribute Authorities
- Removed topics not needed
  - Detailed security requirements (as covered by Sirtfi)
  - Legal and management issues
- Reworded existing topics as necessary

Structure of the Snctfi document

- Background and Introduction
- Operational Security
  - [OS1] Abide by the *Infrastructure* defined security requirements, e.g. a CSIRT
  - [OS2] Meet the requirements of Sirtfi
- Participant responsibilities
  - Addresses issues related to user management, AUPs, security incident response, …
    - Users
    - Collections of users
    - SPs
- Data Protection
  - Bind those SPs that consume eduGAIN attributes (and some collections of users) to either
    - A common *Infrastructure* Data Protection policy (framework)
    - Or the GEANT DP CoCo

Future plans

- Timelines
  - Aiming for a complete draft by end of March 2017
  - Then wider discussion with FIM4R and REFEDs
- “Publish” a version of Snctfi (as a proposed trust framework)
  - An AARC NA3 deliverable – to be completed before end of April 2017
- Then Snctfi can still be modified during formal adoption
  - In AARC2
  - by FIM4R/IGTF (and REFEDS)

- As an aside:
- SCIV2-WG busy in “WISE”
  - Can we merge SCI version 2, Sirtfi and this new framework?
  - *https://wiki.geant.org/display/WISE/SCIV2-WG*
- Decided to tackle this re-merge for SCI version 3

Thank you

Any Questions?

david.kelsey@stfc.ac.uk

AARC

https://aarc-project.eu

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