## Agenda – Day Two

### 09:00 – 11:00 Bringing the Campuses to the Federation

- 09:00 Recap of Day One
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### 13:30 – 16:00 Federations in Practice

- 13:30 eduroam, eduGAIN and Social Identity Mapping
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- 14:30 Business Plan
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# WHY IDENTITY MANAGEMENT AND FEDERATIONS

Brook Schofield, GÉANT





# Why Identity Management & Federation

**Brook Schofield**eduGAIN Product Manager
GÉANT

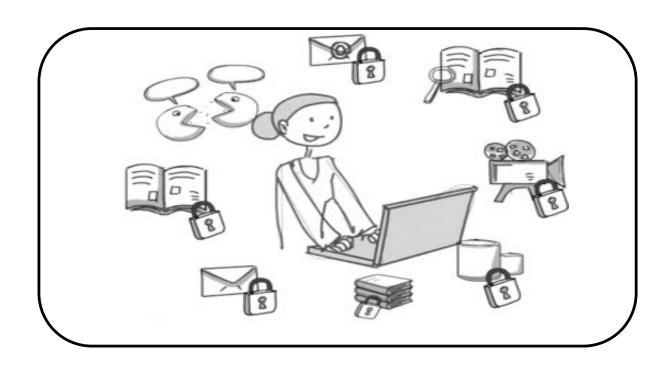
Hong Kong 1<sup>st</sup> August 2016

# The computer lab



Image URL: http://www.fox.temple.edu/cms\_about-fox/technology/it/resources/computer-labs/

# The Situation on Campus: Lots of Applications



- Applications for students and researchers
- Applications require authentication and authorization

### Identity Management...

A solution to the exploding password systems

Don't create "one more" in the hope that I will

become "one less".

Pick an existing one

- /etc/passwd
- Library Management System
- Student Enrolment System
- Pick tools that match your skillset



### More that one choice is good...

- simpleSAMLphp
  - PHP
  - Multi-lingual support
- Shibboleth
  - IdP is Java, SP is C/mod\_shib
  - Runs within Apache Tomcat/Java
- PySAML2
  - Python



- Benefits are greater than using LDAP.
- Many plug-ins or modules available for common tools.



### What NOT to focus on?

- Waiting until ...
  - NRENx has their federation in "production".
  - NRENy is a member of eduGAIN.
  - A "killer app" is found.
- "Other" or Future Federation Technologies
  - OpenID Connect + OAuth are being explored
  - Hub & Spoke gateways already exist.
- Policy vs Technical
  - You can focus on one (or the other, or both).



### What to focus on?

- Federating your campus systems
  - Talk to your researchers, staff & students
- Investigate key services
  - Intranet and Website
  - Webmail
    - Google Apps for Education, Microsoft 365
  - e-Learning Moodle, Desire2Learn
  - Talk to your librarian about Journal Access
- Find your own "killer app".





# DIGITAL LIBRARY CONTENT AND LICENSING

Nicole Harris, GÉANT





# Learning Objective – Digital Library Content and Licensing

Understand how current library resources are being used by federations.

Have a grounding in the content that is already available via federations and how you can engage.

Learn some approaches to ensuring licensing compliance.

Understand some of the problem areas with publishers.



# Connecting People to Resources



### What can I use?

12507 Entities

3760 Identity Providers

8747 Service Providers



# MET is your friend!

### Most federated entities





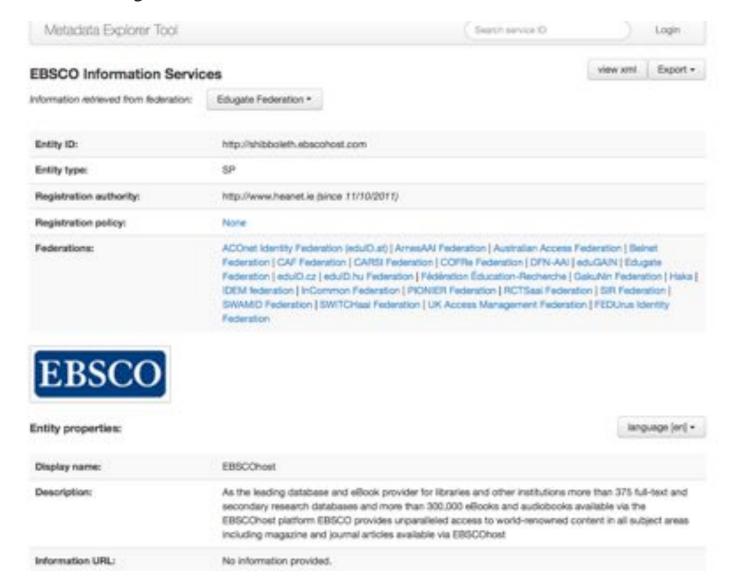
https://met.refeds.org/

# MET is your friend!

### Federations summary

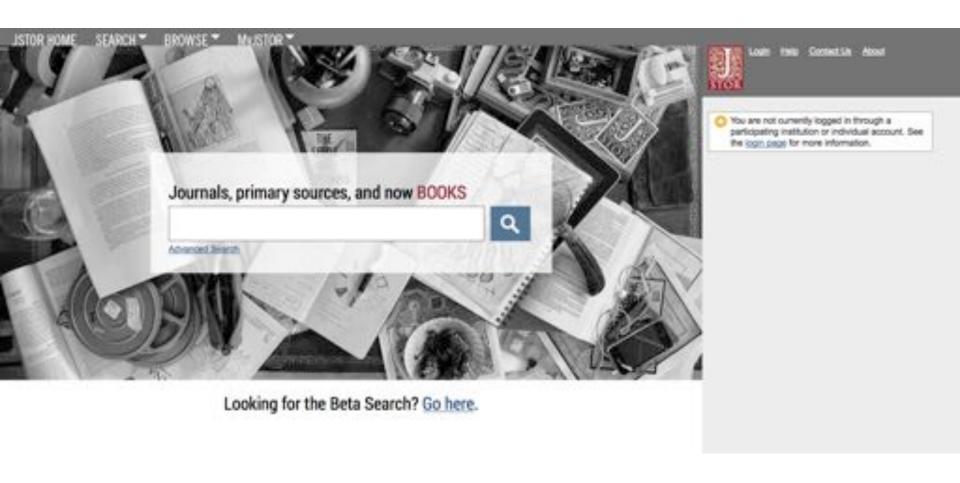
Total: 39 Name	Country	Entities	IDP	Export •	
				SP	
AAI@eduHr Federation	Crostia	3	1.	2	
ACOnet Identity Federation (eduiD.at).	Austria	146	42	105	
AmesAAl Federation	Slovenia	271	57	214	
Australian Access Federation	Australia	253	52	196	
Beinet Federation	Belgium	109	40	69	
CAF Federation	Canada	110	39	71	
CAFe Federation	Brazil	162	129	33	
CARSI Federation	China	133	84	49	
COFRe Federation	Chile	31	5	26	
DFN-AAI	Germany	490	218	272	
Edugate Federation	Ireland	147	42	105	
edulD.cz	Czech Republic	284	73	210	
edulD.hu Federation	Hungary	89	25	63	

# MET is your friend!





# Library Resources for Universities



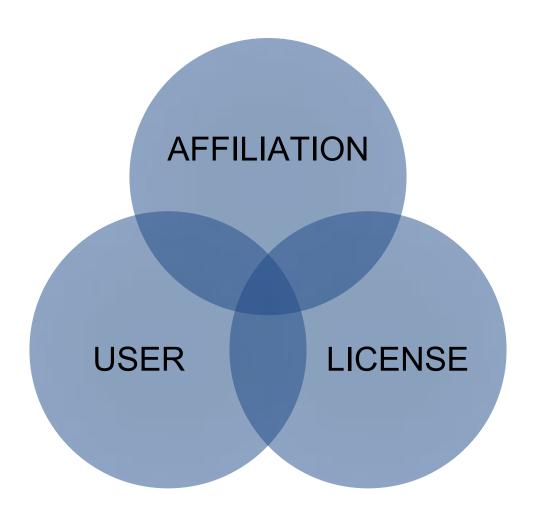


# Library Resources for Schools





# Why is it a good fit?



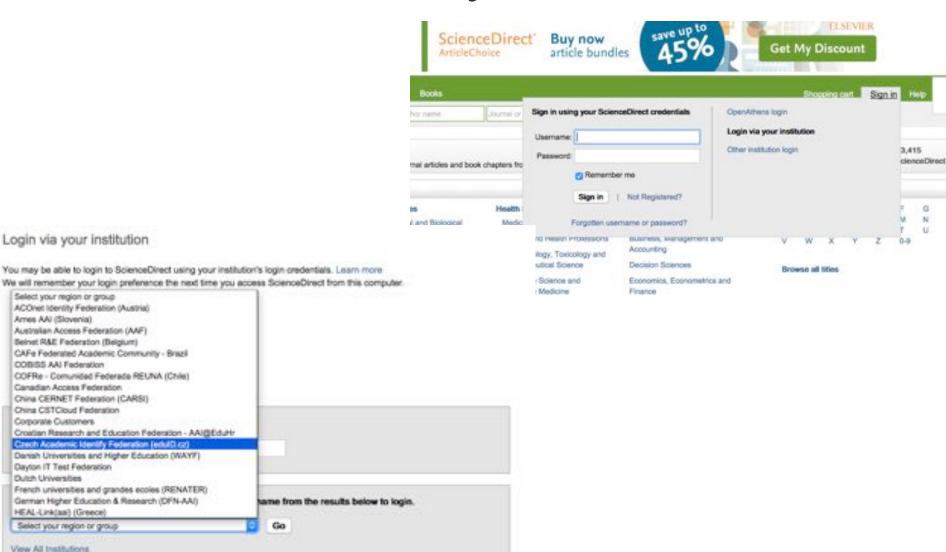


# Licensing – Jisc Collections

"provide access to the Material by UK Access
Management Federation for Education and Research
compliant technologies as a member of /and to join
the UK Access Management Federation for Education
and Research, subject to securing any necessary
permissions, licences or consents (including, without
limitation, any necessary permissions, licences or
consents in respect of Intellectual Property Rights)."



## Issues - Discovery



# discovery.refeds.org

### REFEDS DISCOVERY GUIDE

REFEDS demonstrates the most effective way to present federated identity to users of your site, with best practice and examples of how to provide the best experience.

### BEST PRACTICE GUIDE

In just 4 simple steps you can learn the key recommendations from the NISO ESPRESSO report and find out how to implement federated login in a way which protects your brand, improves user satisfaction, and increases successful logins.



### DISCOVERY

See a guided demo of how to implement the best practice guide with visual demonstrations of how to, and how not to, use federated login effectively.





VIEW THE DISCOVERY DEMOS



# POLICIES AND PRACTICES FOR A FEDERATION

Nicole Harris, GÉANT





# Learning Objectives - Policies and Practices

Know what policies you need for your federation.

Understand using existing templates for materials.

Know what to avoid when writing policy.

Understand eduGAIN policy requirements.



## **Building Blocks of Federation**

**Attributes** 

Identity Provider / Service Provider

Discovery

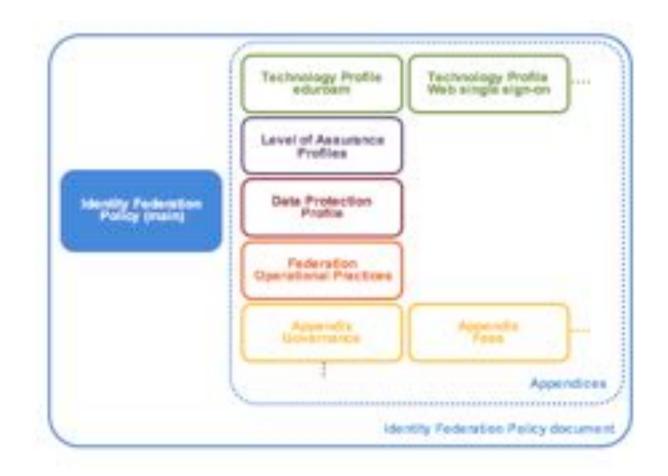
**Federation Tools** 

Metadata

Policy



### **Document Structure**





### **Federation Policies**





UK Access Management Federation for Education and Research

Rules of Membership

1" August 2011





### TERMO DE COMPROMISSO PARA ADESÃO A FEDERAÇÃO CAF+

Pala pricata, a espaticação identificada nota Terma, os desenha de PARTICPANTE, adem a está efectivante a estabune a imparabilidade pela elifecção do semejor disposibilidados, pela Comendade Audéleira, Federada, desento descenhada implemento CAFe, ciente de "Palitica de Uba de Federação CAFe, provedente de serviça", o do "Palitica de Uba de Federação CAFe, provedente de identificação", do "Palitica de Uba de Federação CAFe, provedente de identificação".

PARTICIPANTE (Nome de Instituição) com tede na (entrescit, neste sia representada por (mante completo), fosciolo, documento denominada (logia de Instituição)

O presente Termo considera que:

- a) A Federação GAFe à composta por um conjunto de instituições que, sobre uma influestratura de autoritização e autorização medidaminos, costobeles e uma rede de confluesça que implifica a ocissa o acesque sempos federados obrecodos.
- b) A RSP ten cene abbeção o perecuente dos processos de disposibilidade, contabilidade e melhora cortinos do Serviço do CAFe, aiem de apriar a leminispojo meseño a elecisió de nono Sirvendom de identidade e Proventivos de Serviço na federação CAFe, ben ceno o sipiote a abadizações e melhoras costidares;
- c) a RMP e a PARTICIPANTE tión intervicio como na manufacição e desenvalvemento de Federação CAP e con o objetivo de simplificar o processo de Autoriticação e Autoriticação entre as incluitos de participantes;
- d) a PARTICIPANTE tam interess em integrar a Federação CAFa como Provedor de Mentiones de Devenços para beneficio de comunidade de educação, pesquita e collete.

Para tanto, a PARTICIPANTE da cióncia e se compromete ao que se segue:

### 1 - 00 08JET0

1.1 – O presente Termo tem por objeto estabellecer as diretrizas de participação, a serem realizadas com o apeio reclántos, na CAPe;



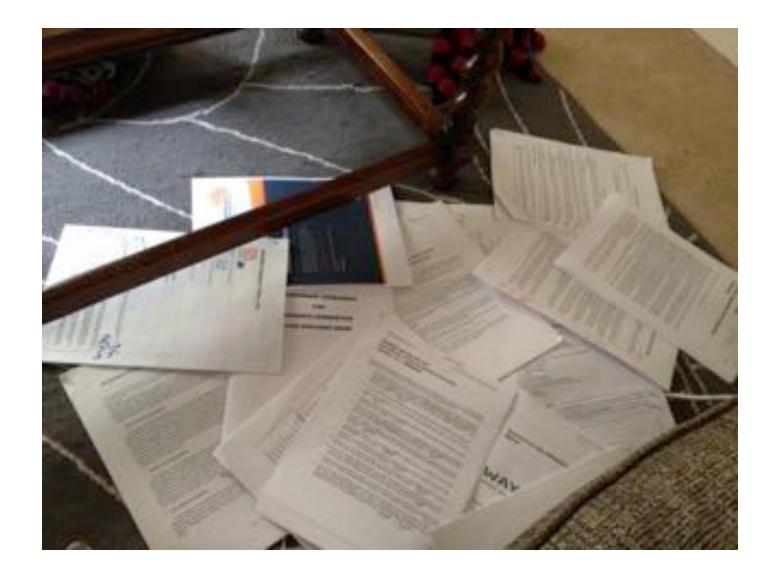
an applicant for the identity transfer services provided by the RedRIS Identity Service (SRI), to be used by the identity provider identified by its 1994, unique ID, and public key included at the end of this document per

- Involves and accepts the sales, procedures and between departments for the connection of their secrety, inscriptions of control sections of the secrety accepts as a specified of their secret accepts and accepts and accepts accepts a secret accepts and secrety to the fixed drawler commercials with an infection that except accepts and secrety to the fixed drawler control section accepts and accepts accept accepts and accepts accepts and of this document of the corresponding admissed entangent.
- 2. Hnows that breaking these conditions can imply the discontinuation of the service.
- Cectares that data included in this document are accounte, apart error or omission in good.
- Connels to permanently update the information included in this document, informing the PERs of any change that takes place.
- Assumes that RedRS, in all procedures related to service provision, will act according to the data provided in this discussest.
- Prows and accepts that any faisity or enter in the data included in this document can be cause of the discontinuation of the service.
- 2. Histows and accepts that once the service is active it can be revoked in case of violation of the
- 8. Hnows and assumes that the service can be revoked in case of serious technical negligence.
- Cectains Bud, according to their best knowledge, the connection of the identity private identified below with the Red/RSS Identity Service does not have the rights of any third party.
- Hnows and accepts that the service is provided by RedRIS in non-commercial terms for its users in the research and academic community, and triod RedRIS shall not be held liable for any damage caused, directly or indirectly, by the usage of the service.
- Hnows and assumes that filed RIS will perform personal data processing according to Ley Organica 15/1 999 on Personal Class Protection and the regulations developing 6.
- 12. Prows and assumes that the rights to access and rectification can be exercised according to the above membraned regulations. The rights to carcellation and apposition can only be exercised after the decembration of the service, since personal data processing by Red as is required for the use of the RedRHS identity Service.



Version 2.1 ST/AAI/UKF/DOC/001

### All the Federation Policies





# What is a Federation "Policy"?

The Federation Policy document defines the Federation by defining the Federation Members' obligations and rights to be able to use available Federation Technologies for electronic identification and for access to attribute and authorisation information about End Users in the Federation.



### Contents of Policy

### **Definitions and Terminology**

### Introduction

### Governance and Roles

- Governance
- Obligations and Rights of Federation Operator
- Obligations and Rights of Federation Members

### Eligibility

### Procedures

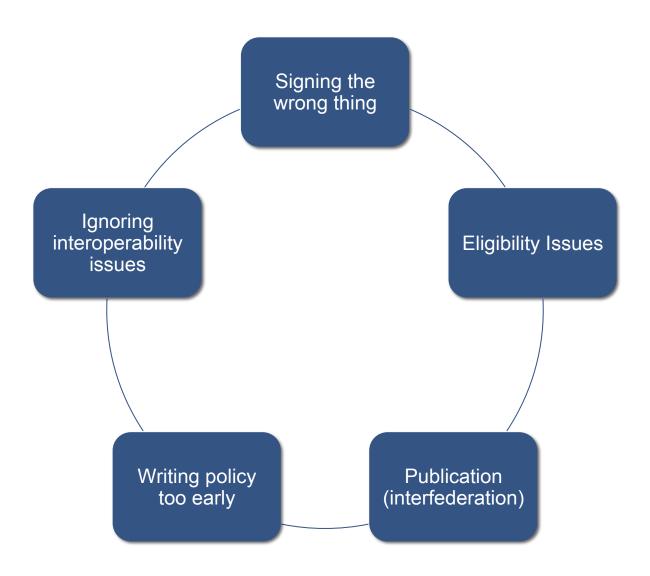
- How to Join
- How to Withdraw

### Legal conditions of use

- Termination
- · Liability and indemnification
- · Jurisdiction and dispute resolution
- Interfederation
- Amendments

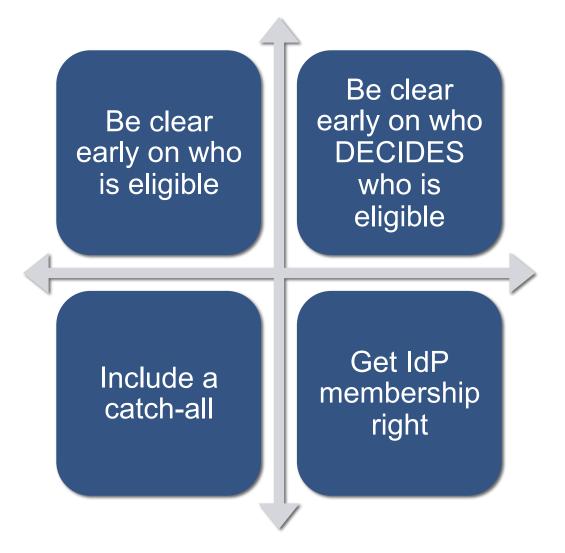


### Common Mistakes





# Eligibility





### **Publication**



"The Member grants the Federation Operator the right: to publish and otherwise use and hold the Metadata for the purpose of administering the operation of the Federation; to publish the Member's name for the purpose of promoting the Federation."

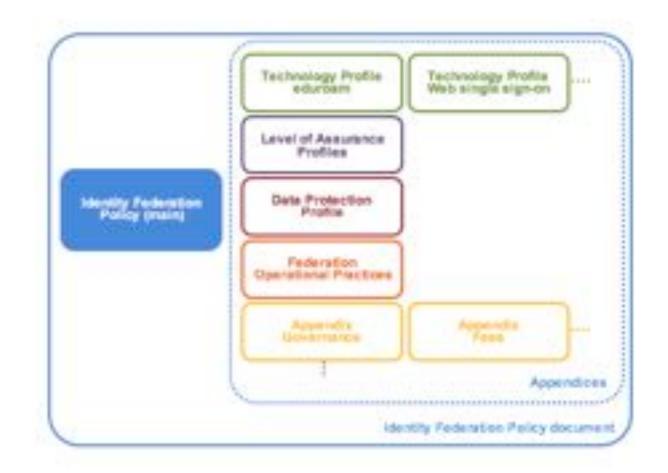


"In order to facilitate collaboration across national and organisational borders SWAMID MAY participate in interfederation agreements."



"This Agreement governs the Edugate Federation's national access management federation only. For the avoidance of doubt this Agreement does not apply to interfederation access, confederation access or metadata exchange."

# What else do you need?





### REFEDS templates and support

Business Case

### Federation-Best-Practice Home

Created by Nicole Harms, last modified on Dec 11, 2015

REFEDS offers a wide range of advice and guidance on best practice for research and education federations. This space is divided into the following sections:

- (i) Value Proposition REFEDS has created a document describing the value proposition for federations. This is a good place to start if you are considering implementing an identity federation and need more background information and support.
- JISC created a Business Case document to help identity Providers make the case internally for the work required to implement SAML. The document was written at the beginning of the UK Access Management Federation but is still valid and a valuable resource.

- Policy Template The GÉANT project created a Federation Policy Template to help new and emerging federations quickly understand the requirements for federation policy and to support an interoperable approach to policy creation and implementation. Federations are encouraged to use this template.
- Metadata Registration Understanding the Metadata Registration Practices of federations is key to understanding the trust framework for the federation. REFEDS and GEANT have created a template Metadata Registration Practice Statement and federations are encouraged to use this template. This statement is a requirement for federations joining eduGAIN.

https://wiki.refeds.org

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## DISCUSSION

Heather Flanigan, REFEDS & NSRC Nicole Harris, REFEDS & GÉANT Brook Schofield, GÉANT Terry Smith, AAF



# EDUROAM, EDUGAIN AND SOCIAL IDENTITY MAPPING

Brook Schofield, GÉANT





# eduroam, eduGAIN and Social Identity Mapping

**Brook Schofield**eduGAIN Product Manager
GÉANT

Hong Kong 1<sup>st</sup> August 2016

## The computer lab



Image URL: http://www.fox.temple.edu/cms\_about-fox/technology/it/resources/computer-labs/

University Modem Pool



# eduroam eduroam

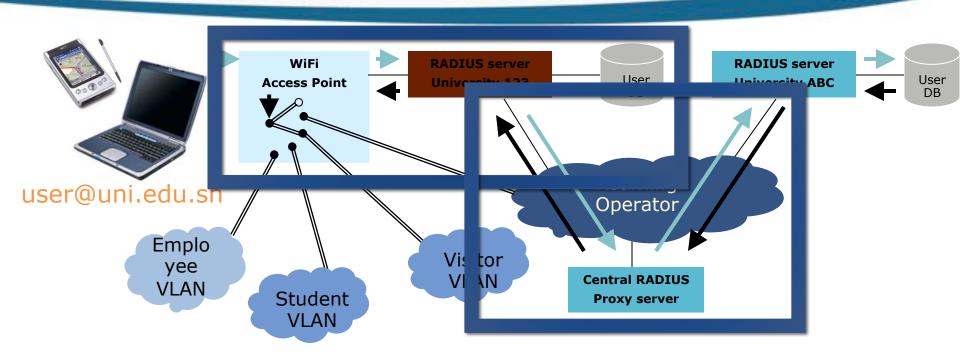
education roaming

Secure Wireless Service for Research and Educat



#### eduroam Infrastructure





signaling

- Trust based on national policy
- Security based on 802.1X/RADIUS
- VLAN assignment to separate users

### Where is eduroam?

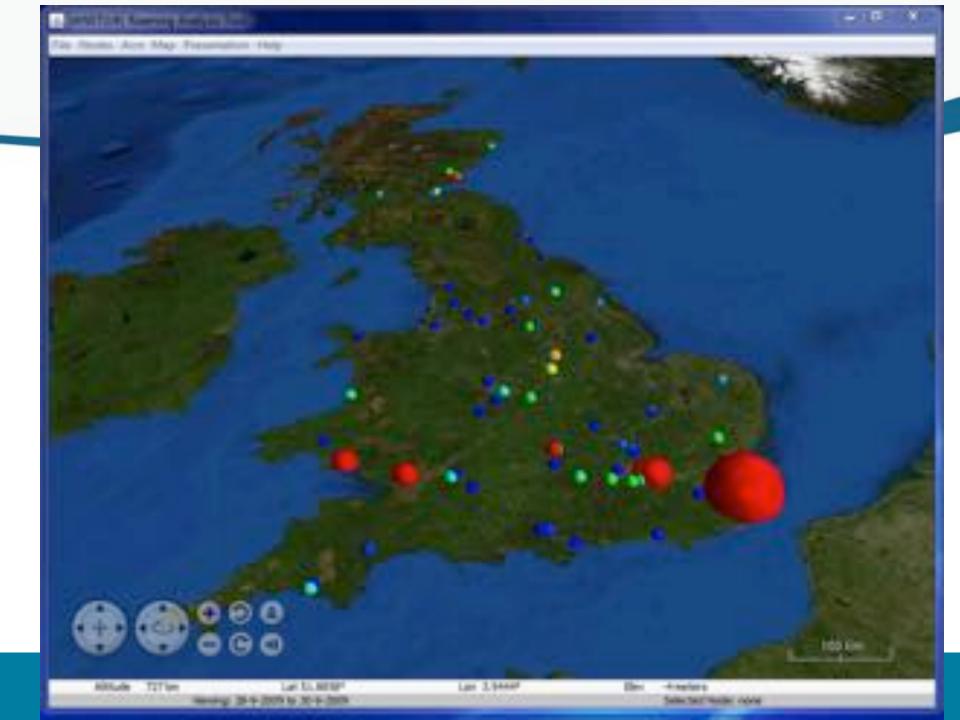












### eduroam in Asia/Pac

- 5 production deployments
   Kenya, Morocco, Uganda
   South Africa, Zambia
- 7 pilot deployments
   Nigeria, Senegal, Algeria, Egypt,
   Sudan, Tanzania, Tunisia.



## Back into the computer lab



Image URL: http://www.fox.temple.edu/cms\_about-fox/technology/it/resources/computer-labs/



# The Situation on Campus: Lots of Applications



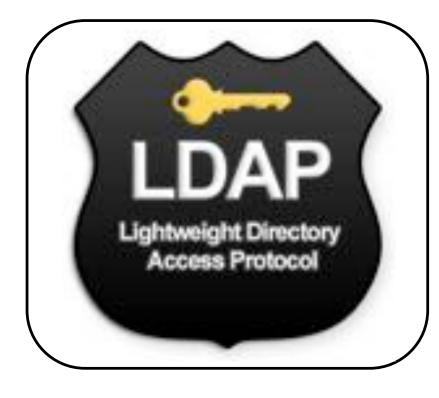
- More applications for students and researchers
- Applications require authentication and authorization



#### Solution #1: LDAP

- Centralised Password & Account Storage
- Re-use of Accounts/Password across applications
- Focus password security at one location



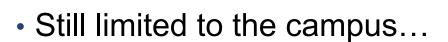




## Solution #2: Web Single Sign-On

(SSO) Centralised Account Login

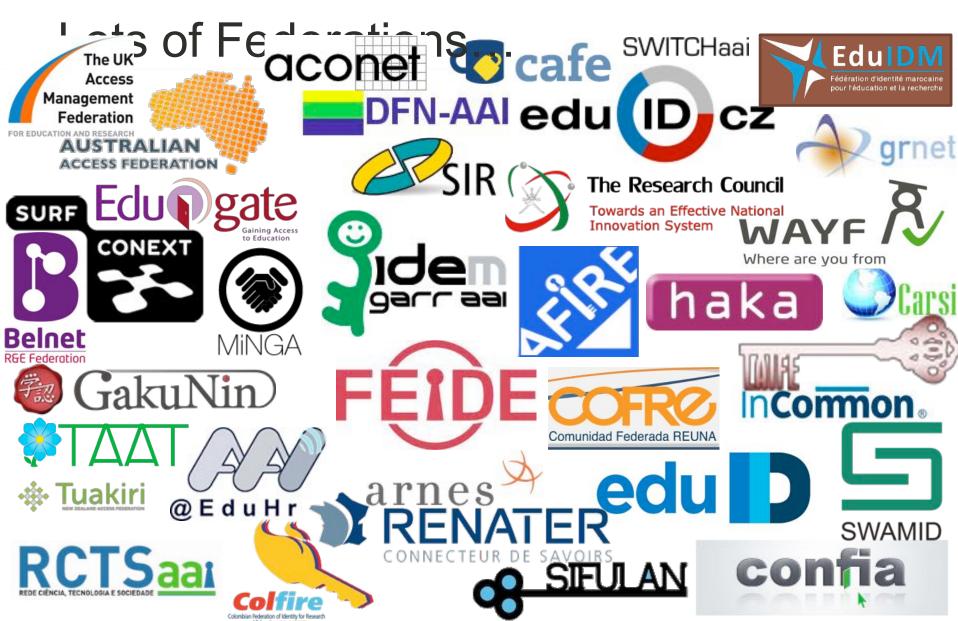
- Re-use of Accounts across applications without another login (while your session is valid)
- No Man-in-the-Middle password attack from LDAP connected applications



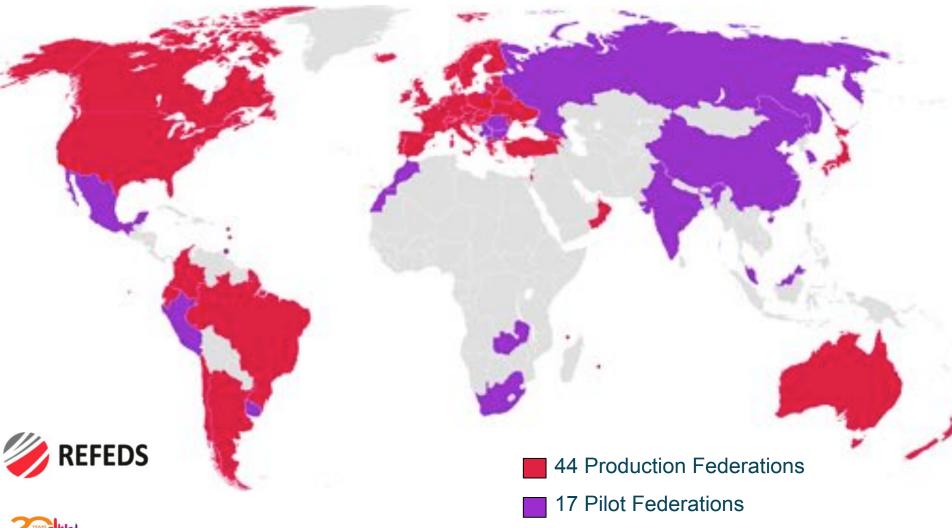




### Solution #3: Federations



## Identity Federations: World Wide





# No interconnection between federations





### Global Authentication INfrastructure

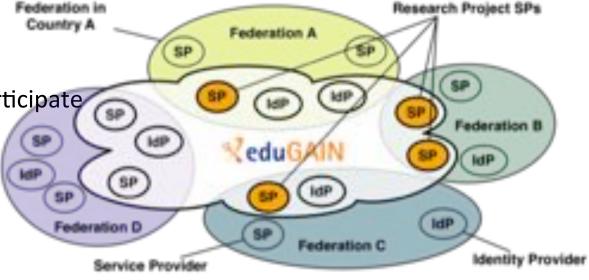




# eduGAIN: Global Authentication INfrastructure

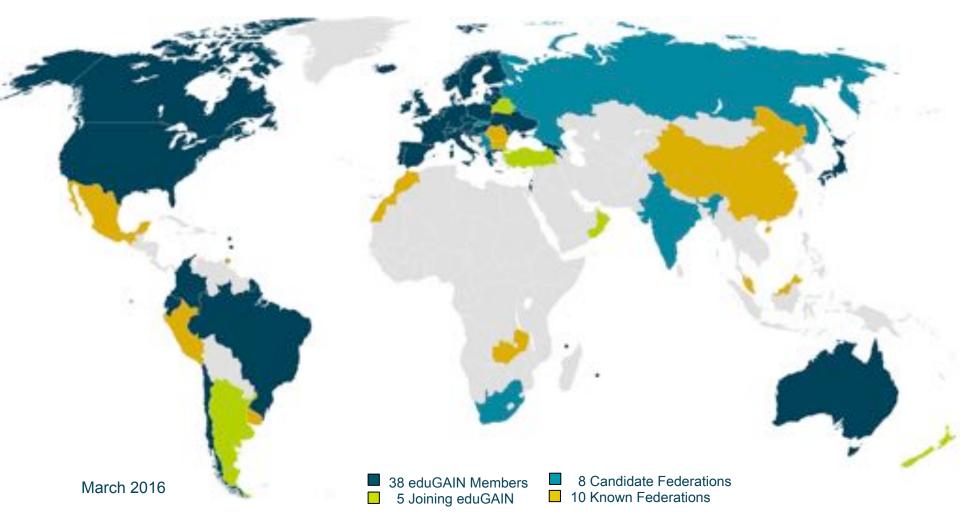
- Contribute the valuable resources from your federation to a global pool
- Services:
  - Free
  - Licenced
  - Project Specific
- People:

Allow everyone to participate





## eduGAIN & Federation Status





# Identity Federations and Africa

- eduGAIN Participant / Joining
  - None 😕
- eduGAIN Candidate
  - South Africa
- Pilot/Known Federations
  - Morocco → eduIDM
  - Zambia (supported by SURFnet)
  - NgREN Federation
  - WACREN EduID





# Identity Federations and Asia/Pacific

- eduGAIN Participant / Joining
  - Australia (AAF), Japan (GakuNin), NZ (Tuakiri)
- eduGAIN Candidate
  - India (InFed)
- Pilot/Known Federations
  - China (CARSI + CSTNet CloudFed
  - Hong Kong + Macau (HKAF)
  - Malaysia (SIFULAN)
  - Singapore (SGAF)
  - Taiwan (?)





## Federation Development Criteria

Pilot

Name, Webpage, Metadata Feed

Production

Policy for IdPs & SPs

Candidate

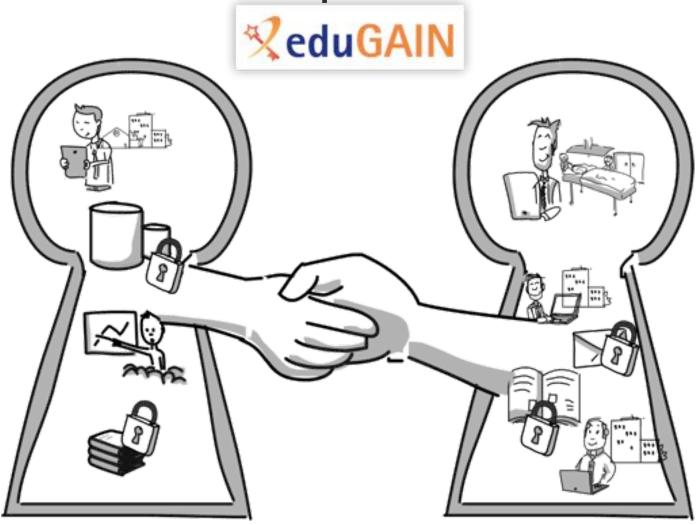
Metadata Registration Practice Statement

eduGAIN

 Declaration Signed, Metadata Feed Validated



We're here to help...





## Social Identities...





## A family of services

# (C)))) eduroam





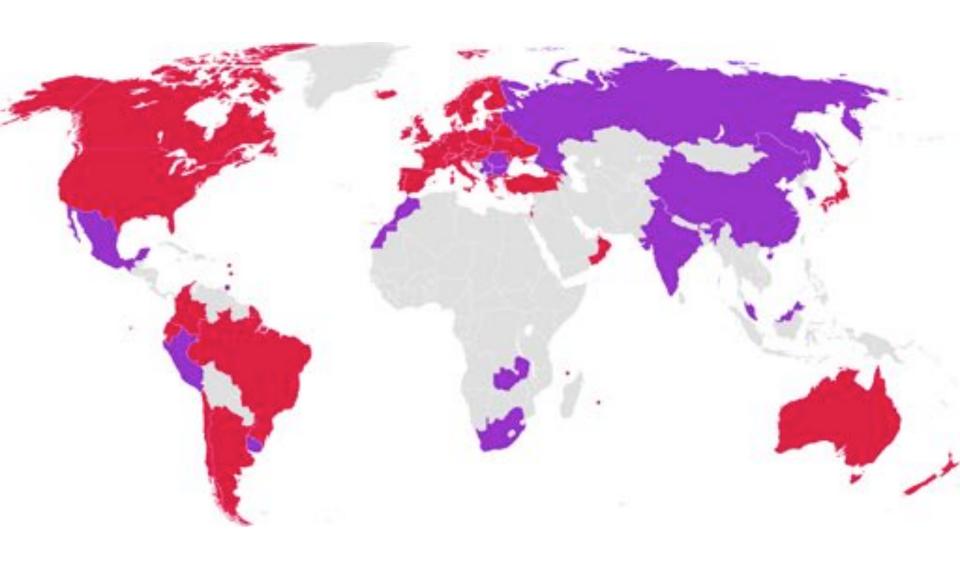
## GLOBAL OUTREACH AND PARTICIPATION

Nicole Harris, GÉANT



#### Lots of federations...





44 Production Federations
17 Pilot Federations



"the voice that articulates the mutual needs of research and education identity federations worldwide"



## refeds.org



#### Happy 10th Birthday REFEDS

The mission of REFEDS (the Research and Education FEDerations group) is to be the voice that articulates the mutual needs of research and education identity federations worldwide. The group represents the requirements of research and education in the ever-growing space of access and identity management, working with and influencing the direction of other organisations on behalf of our participants.

REFEDS participants are from a wide range of backgrounds, but all share an interest in developing access and identity management technology, policies and processes. Many participants represent national identity federations and many come from National Research and Education Networks ("NRENS").



Support Documents

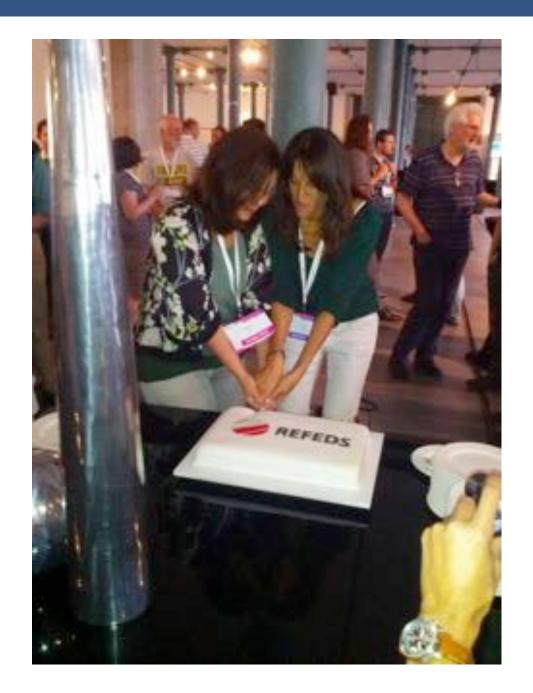


The REFEDS Community



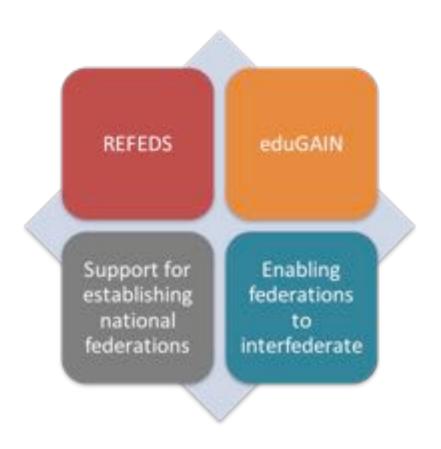
Unlocking Attributes





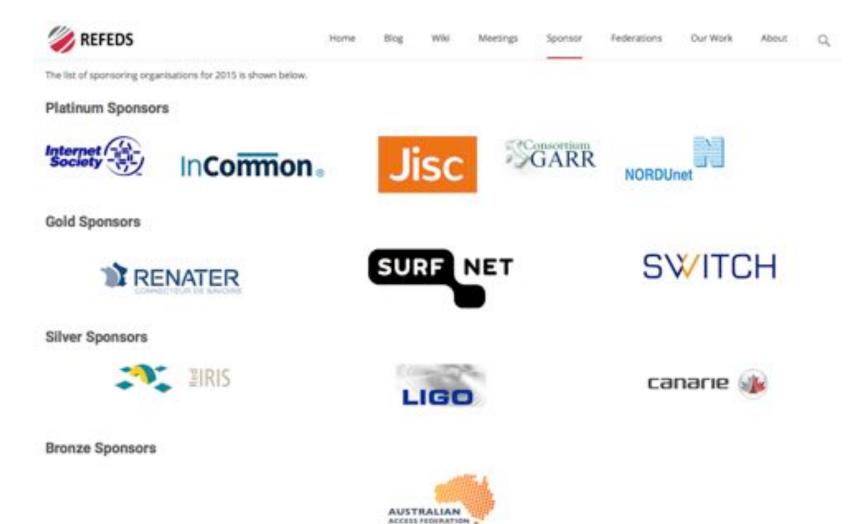


## REFEDS vs eduGAIN





## With thanks to our sponsors





### To Do....

Sign-up to the mailing list:

https://lists.refeds.org/sympa/info/refeds.

Tell us about your federation and add to the map:

https://refeds.org/federations.

Give us your metadata feed for MET:

https://met.refeds.org/.

Come to our meetings and participate!



### What do we do?

ENTITY CATEGORIES

FIM4R / SIRTFI

FEDERATION TEMPLATES

VIRTUAL ORGANISATIONS

**MONITORING** 

SPECIFICATIONS AND SCHEMAS



### What do our users want us to do

- 1. User Friendliness
- 2. Homeless Users
- 3. Different Levels of Assurance
- 4. Community based authorization
- Flexible and scalable attribute release policies
- 6. Attribute Aggregation & Account Linking
- 7. Federation solutions based on open and standards based technologies
- 8. Persistent & Unique User Identifiers
- 9. User managed Identity Information
- 10. Up to date identity information
- 11. User groups and roles
- 12. Step up authentication

- 13. Browser and non-browser based federated access
- 14. Delegation
- 15. Social media identities
- 16. Integration with e-Government infrastructures
- 17. Service Provider Friendliness
- 18. Effective Accounting
- 19. Policy Harmonization
- 20. Federated Incident report Handling
- 21. Sufficient Attribute release
- 22. Awareness about R&E Federations
- 23. Semantically harmonized identity attributes
- 24. Simplified process for joining identity federation
- 25. Best practices for terms and conditions



## **REFEDS Training Log**



Pages / Outreach Home B





Created by Noose Harris, lest modified on Mar GT, 2016



The following resources can be used for training associated with federations. Some of this material was created by REFEDS and some by other organisations. Please note the acknowledgements and licenses.

- . Getting Started Business Case
- . Getting Started Federation 101
- Community Use Cases
- . Suilding a Federation
- . For IdPa / SPa

#### Getting Started - Business Case

Resource	Description	Audience	Authors / Licenses
Value Proposition for Identity Federations (supporting slides)	High level overview of the value of identity federations.  Slides create for APAN training event by Heather Flanagan for NSRC.	Decision Makers	Heather Flanagen for REFEDS. Creative Commons CC SY 3.0.
Jisc Business Case Toolkit (supporting slides)	Business Case for adopting SAML based federations at institutions.	Decision Makers / Project Managers.	Curtis and Cartwright for JISC. Unknown license.
Jisc Institutional Preparedness Report	An approach taken by Jisc to assess the readiness of its organisations to adopt federated access. Approach could be reused.	Decision Makers.	Curtis and Cartwright for JISC. Unknown license.







### New Year's Resolutions









### Attribute Release

https://wiki.refeds.org/display/ENT/Guidance+on +justification+for+attribute+release



## Reasons to Release Data (UK)

CONSENT	The data subject has unambiguously given his consent.
CONTRACTUAL	Processing is necessary for the performance of a contract to which the data subject is party.
LEGAL OBLIGATION	Processing is necessary for compliance with a legal obligation to which the data controller is subject.
VITAL INTEREST	Processing is necessary in order to protect the vital interests of the data subject.
PUBLIC INTEREST	Processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller or in a third party to whom the data are disclosed.
LEGITIMATE INTERESTS  ZIAN LIANA APAN (2) HONG KONG APAN (2) APAN (2) HONG KONG APAN (2) APAN	Processing is necessary for the purposes of the <b>legitimate interests</b> pursued by the controller or by the third party or parties to whom the data are disclosed.

## 7 Step Plan

#### STEP ONE

Check that Legitimate Interests is the best approach.

#### STEP TWO

 Qualify the legitimacy of the request – lawful, clearly articulated, real need.

#### STEP THREE

 Determine whether the processing is necessary to achieve the goal.



## 7 Step Plan

#### STEP FOUR

 Balance the data controller's needs against the interests of the subjects.

#### STEP FIVE

Identity safeguards you can put in place (tech design etc).

#### STEP SIX

Demonstrate (publish) compliancy.

#### STEP SEVEN



· Allow the user to opt-out.



The NSRC cultivates collaboration among a community of peers to build and improve a global Internet that benefits all parties. We facilitate the growth of sustainable Internet infrastructure via technical training and engineering assistance to enrich the network of networks.

Our goal is to connect people.

www.nsrc.org

