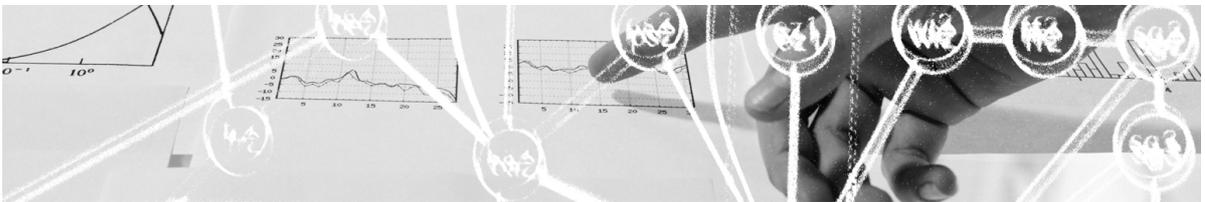


Approaches to Support International Research Communities in SWITCHaai

Focus: Interfederation and eduGAIN



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This paper sets out recommendations for support of International Research Communities in SWITCHaai via eduGAIN.

1 Overview

The aim of the paper is to ensure SWITCHaai Participants are aware of the methods and tools supported by SWITCHaai¹ to enable researchers in Switzerland to collaborate internationally, including hosting and providing international research infrastructure themselves and are briefed on the implications of future work in this area.

The highly distributed nature of research collaborations means that the individual user footprint per institution can be quite small, making their requirements appear costly and time consuming to resolve for home organizations. On the other hand, the collective requirements and scale of these groups and their impact on R&E [Appendix B] is significant so they are an important use case for federated identity management.

Attribute release from home organizations in particular is key but the operators of the research infrastructures frequently do not have relationships with campus IT departments on a cross border basis to work together.

Research collaborations may have their legal identity in a different country to their infrastructure operator, which can cause uncertainty about where their services may be made available within federations.

These conditions cause uncertainty for both research collaborations and home organizations in understanding how to best support the AAI needs of researchers working on an international basis.

Via our leading work in GÉANT², SWITCHaai is in a position to aggregate a picture of the requirements of diverse research collaborations. We propose recommendations for scalable support of research communities throughout Europe, relying as much as possible on existing infrastructure.

This paper focuses on how these recommendations can be supported within SWITCHaai, aiming to keep the workload for SWITCHaai Participants as low as possible. We also provide supporting information on current research infrastructures in Europe and the principles of interfederation.

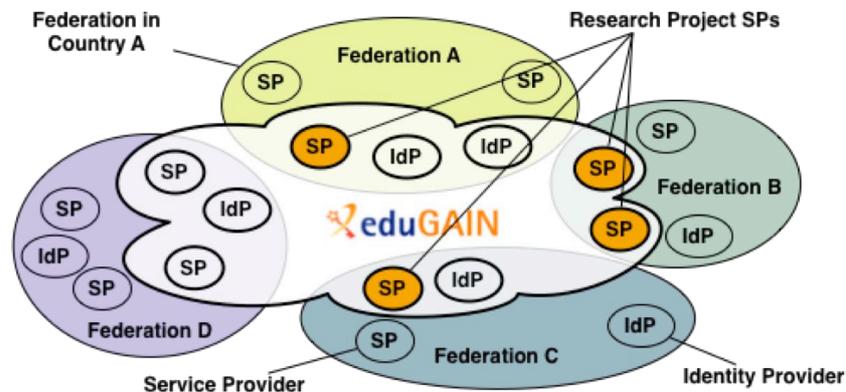
¹ http://www.switch.ch/aai/docs/SWITCHaai_Service_Description.pdf

² <http://www.geant.net/About/Pages/home.aspx>

2 Current Approach

2.1 Option A: All SPs of a research project in eduGAIN via existing federations

2.1.1 Architecture



2.1.2 Recommendations for Support

Research communities can currently make their services available either by being „adopted“ by a SWITCHaai participant or becoming a federation partner in SWITCHaai based on their legal identity. This is a straightforward way to thereafter expose these SP services to interfederation via eduGAIN. The SWITCHaai Resource Registry supports this and documentation and support on interfederation is available³. Interfederation for Federation Partners is on a pilot basis.

In this case, the research community does not provide any identities and relies only on those provided by home organizations. Where SWITCHaai Participants have users requiring access to services via eduGAIN, SWITCHaai provides recommendations on attribute release for interfederation and supports the process of user consent via uApprove.

SWITCHaai, via our collaboration work in GÉANT and eduGAIN, can make contact with other federations and can make reasonable efforts to investigate availability and configuration of particular services and identity providers..

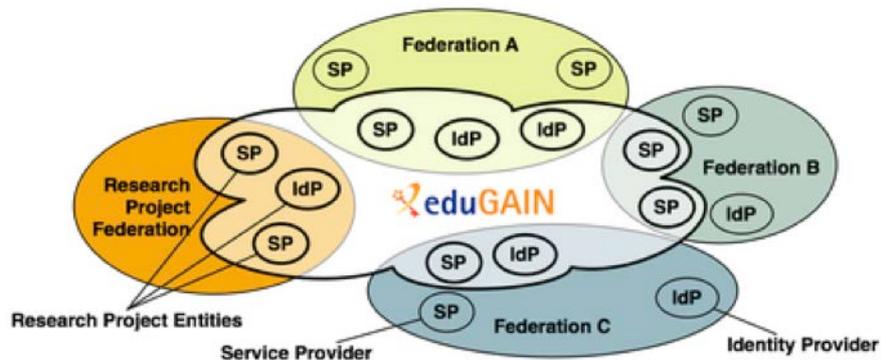
³ <http://switch.ch/aai/interfederation>

3 Future Variants

Two further variants of interfederation are anticipated to support research communities.

3.1 Option B: A Research Collaboration operates its own Federation

3.1.1 Architecture



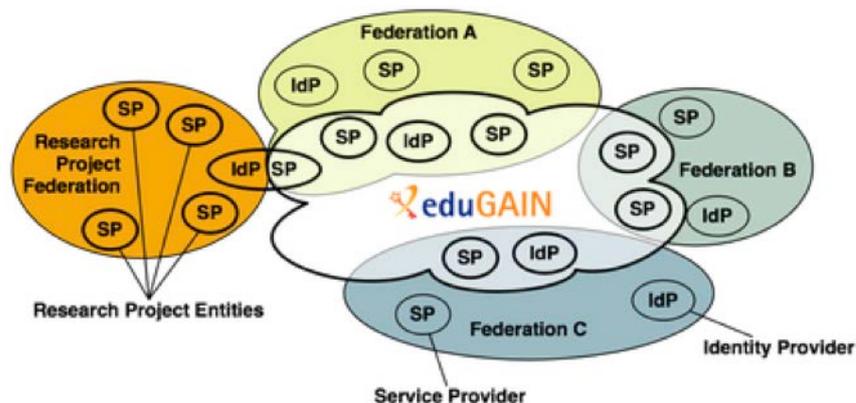
3.1.2 Recommendations for Support

SWITCHaai Participants have no direct implications with this model. Indirectly, there is a small risk that some users will have multiple federation accounts, one via the research community and one via the home organization. Demand for this option across Europe is not high and is focussed on research communities experiencing difficulty getting the attributes they need from home organizations, who therefore wish greater control themselves and who are ready to take the additional effort in setting up and managing their own federation.

Where SWITCHaai Participants have users requiring access to services in a specialist federation via eduGAIN, SWITCHaai provides recommendations on attribute release for interfederation and supports the process of user consent via uApprove.

3.2 Option C: Research project operates a single SP (as hub) which joins eduGAIN via an existing federation

This option has two potential variants - using (SAML) IdP Proxy/Hub or using (Web) Proxy.



3.2.1 Recommendations for Support

If a SWITCHaai Participant from the SWITCH Community closely collaborates with a research community, it can decide to take the responsibility for the research community's IdP and SP services behind the proxy and vouch for them towards the SWITCHaai Federation.

Before accepting this responsibility the SWITCHaai Participant is advised to review the user administration and personal data handling processes implemented in the research community and judge the risks involved against the benefit of facilitating access to federated authentication and authorisation for the collaborators.

It is assumed that the ICT department and research community representatives within the home organization work closely together to agree to provide this support before connection to the federation.

SWITCHaai, via our collaboration work in GÉANT and eduGAIN, can make contact with other federations and can make reasonable efforts to investigate availability and configuration of particular services and identity providers.

A Appendix: Interfederation and eduGAIN

Interfederation occurs if a user from one federation accesses a service registered in another federation.

Interfederation is useful for home organizations to allow their users to access services registered in foreign federations and for service operators to allow access to users from foreign federations. So getting ready for interfederation means widening the scope of services available for your users or reaching out to more users for your services.

SWITCHaai held an interfederation crash course for participants in 2013. The slides and material are available to the community at <http://switch.ch/aai/events/crash-course-2013/>

eduGAIN is the interfederation service of GÉANT. eduGAIN interconnects identity federations like SWITCHaai around the world, simplifying access to content, services and resources for the global research and education community.

eduGAIN members are listed at <http://www.edugain.org/technical/status.php>

B Appendix: Cross Border Research Community AAI needs

Over 30 Research Infrastructures participate in ESFRI (European Strategy Forum on Research Infrastructure) on a pan-European basis. They are clustered into themed areas:

- BioMedBridges – Bioinformatics - <http://www.biomedbridges.eu/>
- DASISH – Social Science and Humanities - <http://dasish.eu/>
- ENVRI – Environmental Science - <http://envri.eu/>
- CRISP - Physics - <http://www.crisp-fp7.eu/about-crisp/>

These e-infrastructure serve a wide range of projects in these fields and all cluster areas have some Swiss involvement.

Many of these projects grouped together and produced a paper outlining key requirements and challenges for Federated Identity Management (FIM) for Research Collaborations⁴. A key goal set out by the group is to use a common policy and trust framework for Identity Management based on existing structures and federations either presently in use by or available to the communities. The connection options presented in this paper are the most fundamental ways that research groups can effectively use the existing infrastructure in identity federations.

C Appendix: Contact

For questions and comments get in contact with aai@switch.ch

⁴ FIM Paper <https://cdsweb.cern.ch/record/1442597>