

Switch_

Piloting OpenID Federation in the international research and education community

E-ID Participation Meeting, 6 February 2025

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Agenda

1. A word about Switch
2. The “wallet-less” international R&E service ecosystem
3. Wind of change
4. Piloting the new trust protocol OpenID Federation
5. The link to the “Swiss choice” trust protocol



Foundation Switch

Established in 1987

Founded by the Swiss Confederation and eight university cantons

Governed by the Swiss Higher Education community

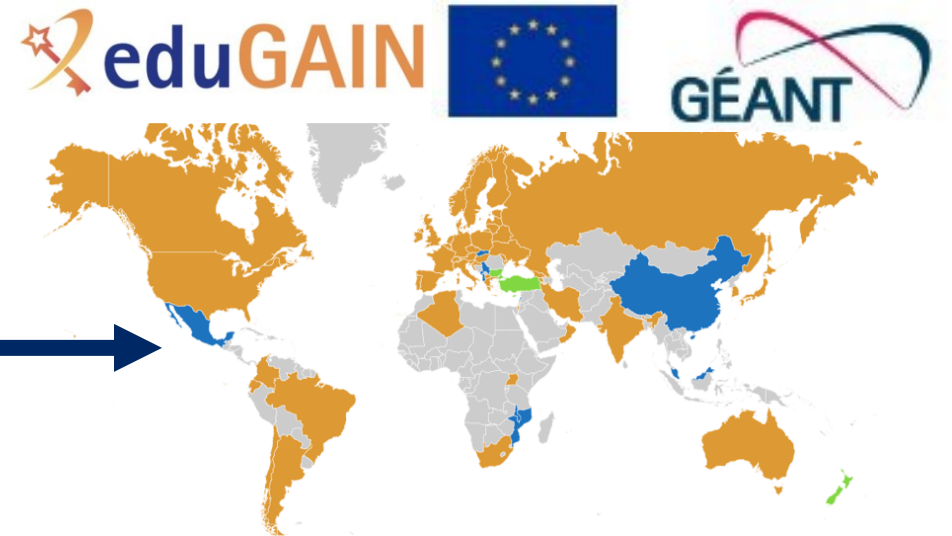
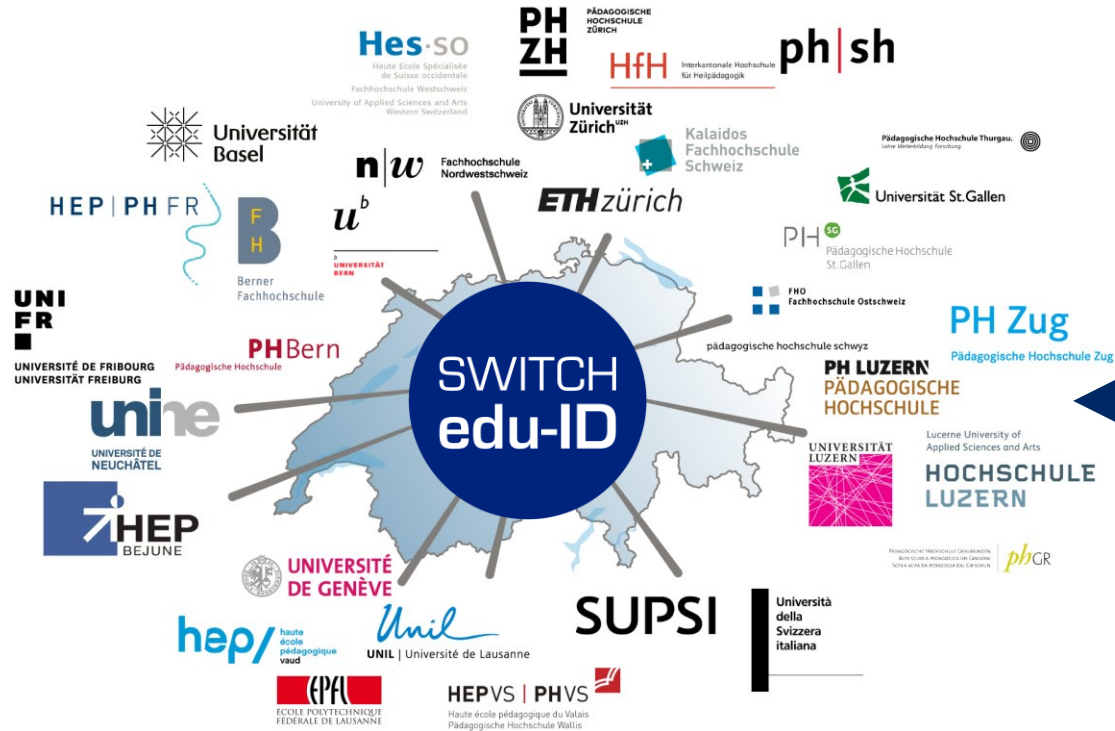
No commercial purposes and not for profit

Balancing interests to maximise benefit for all

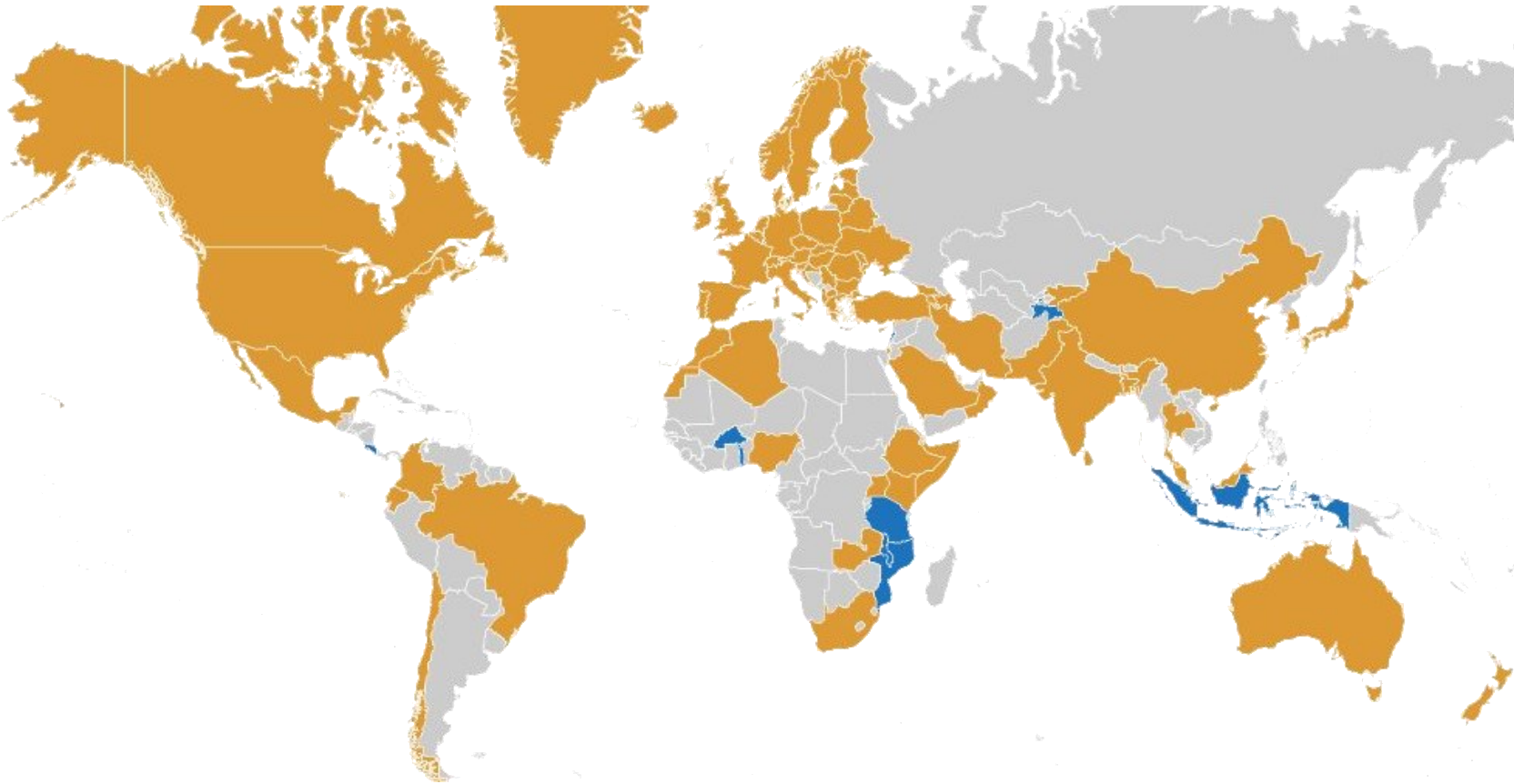
Switch's competencies



The “wallet-less” (inter)national R&E service ecosystem



eduGAIN Global Coverage



78 Federations

9552 Entities

5775 Identity Providers

3795 Service Providers

Last update November 26th 2024








What do we use it for?

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	Lawrence Berkeley National Laboratory	>
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	National Library of Spain	>
	National Agency for Quality Assessment and Accreditation of Spain	>
	eduID.hu Virtual Home (VHO)	>
	National University Hospital of Iceland	>

rometer Gravitational-Wave Observatory, **LIGO**, comprises more than 1,500 scientists, all of whom
 ards a single goal: to capture signs of gravitational waves and decode their meaning. The data
 ns at massive observatories in the USA and Italy, but the analysis is done in countries all over the



thentication, Authorisation and Identification (AAI) technologies and the expansion of
 between organisations and identity federations using eduGAIN has allowed these rapid collaborations to take place by allowing
 se their existing institutional identities to access data on remote systems and securely share results.

om 11 participating countries and around 3,000
 d from mobility under Erasmus by 2017. The
 n Commission under the **European Student Card**
 ically at higher education institutions within the EU
 nd paperwork'. Under this initiative Erasmus
 for student mobility exchange.

emicID project (co-funded by Connecting Europe
 ne the specifications of the eID scheme, including
 l the functioning of the Service Provider (SP) Proxy

eduGAIN's wind of change

eduGAIN is largely based on the SAML protocol

- SAML is a legacy protocol
- No decent support for mobile devices
- No post-quantum roadmap
- Scalability pushed to its limits (or beyond)



eduGAIN is transitioning to OIDC

OIDC lacks native support for federations

- Draft specification of “OpenID Federation” is out
- Reference implementations exist
- In production for the existing eGOV-ID of Italy



eduGAIN is piloting OpenID Federation

Why not solve other problems as we go along?

- Address use cases reaching beyond the international R&E service ecosystem



The E-ID/eID trust frameworks could help

The link to the “Swiss choice” trust protocol

eduGAIN is the identity service of the international research and education community

- Its underlying technical base reaches end-of-life and needs to change
- eduGAIN will likely stay “wallet-free” in large parts

eduGAIN is piloting OpenID Federation as its new trust protocol

- OpenID Federation is gaining momentum in EU member states
- OpenID Federation is on the shortlist as E-ID trust framework in CH

Support for cross-ecosystem use cases is an attractive outlook for eduGAIN

- We expect the E-ID and eID trust frameworks to be instrumental in reaching this goal
- We also monitor governance frameworks for the same goal, e.g. Ayra

We encourage our E-ID team to keep interoperability with OpenID Federation on their watchlist

Resources

DCC-Blog:

- R.X. Schwartz, Selecting the OpenID Federation specification for the DCC and Credential Engine Issuer Registry Project: <https://blog.dccconsortium.org/selecting-the-openid-federation-specification-for-the-dcc-and-credential-engine-issuer-registry-f9079f620472>

FIM4R:

- Davide Vagheti & Niels van Dijk, OpenID Federation PoC within eduGAIN, 19th FIM4R Workshop: <https://indico.cern.ch/event/1438628/contributions/6190755/attachments/2982511/5255619/eduGAIN%20OpenID%20Fedederation%20Pilot%20-%20FIM4R.pdf>

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