



The Value Proposition for Federated Identity Management for Research (FIM₄R)

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Outline

- + The Value Proposition
 - + Highlights – Who, What, Where, and How
 - + Case Studies
 - + FIM₄R
 - + Critical takeaway

The Value Proposition for Identity Federations

- + <https://wiki.refeds.org/x/MoA4>
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Who Benefits?

- + Students and researchers benefit by having:
 - + more collaboration opportunities
 - + potential access to more resources and data
- + The campus or institution benefits by having:
 - + a solidly branded institutional identity which improves the overall reputation of the organization
 - + a stronger security profile for the network
 - + an ability to logically budget for the network based on actual data (who is on the system, how quickly is it growing, where are the bottlenecks)
 - + fewer bilateral contracts; more organizations can function under a common framework
- + The research community benefits by having:
 - + more efficient utilization of resources
 - + easier research collaboration – can be setup within hours rather than days/weeks
 - + easier to share or move data between sites/nodes - where relevant

Where are the Most Compelling Services?

- + Govt. funded national research collaboration and e-infrastructure
- + eduroam
- + eduGAIN
- + digital libraries
- + licensed software
 - + Learning Management Systems (CANVAS)
 - + Wiki
- + Cloud service providers supporting research and education
 - + Researchresearch.com
 - + Qualtrics
 - + AWS Research Grants

How to Make Federated Identity Work

- + Identify the challenge “problem statement”
- + Make the case
- + Action and track metrics
- + Report on the value received
- + Take advantage of existing tools and services through federations such as Tuakiri

Case Study #1: LIGO

- + A large collaboration in physics looking for gravitational waves
 - + 1000 scientists, 5 continents, dozens of institutions, multiple MOUs with other research groups
- + Tools include wikis, mailing lists, document archives, and access to datasets
 - + a goal to even have access to the instruments through SSO
- + The goal is science, not infrastructure
 - + federated identity management reduces the IAM burden on the collaboration

LIGO Scientific Collaboration LSC



Case Study #2: DARIAH

- + A large collaboration of humanities research groups
 - + Coordinating Virtual Competence Centers around general advocacy, research and education, e-infrastructure, and scholarly content management
- + Goal is to develop, maintain, and operate an infrastructure in support of information and communication technology-based research practices
 - + The whole premise is based on federated identity management
- + Tools include the usual collaboration software as well as Curricula, Methodology

Current Figures for DARIAH

- + Over 3100 users by the end of 2015, with more than 250 user groups
- + Collaboration is key, and technologies include LDAP, SAML, and now OAuth2
- + Major challenges include
 - + Many institutions are still not part of a federation
 - + Institutions that are part of a federation often do not release the attributes to the Service Providers
 - + Federated technology is still somewhat focused on web-based tools; non-web-based tools need further development

Research on Researcher Needs

- + Original FIM₄R paper in 2012 described a set of recommendations to the research communities, technology providers, and funding agencies
 - + The core use cases came from large research organizations with funding
 - <https://cdsweb.cern.ch/record/1442597>
- + The “Advancing Technologies and Federated Communities”, also in 2012, described a set of recommendations around technology, policy, funding, and legal issues.
 - + A more generalized approach than the FIM paper, but the recommendations are largely the same

<https://www.terena.org/publications/files/2012-AAA-Study-report-final.pdf>

FIM₄R Findings Summarized

- + Federated technologies are good. Take advantage of them.
- + The infrastructure needs to be improved to take advantage of federated technologies. Do it.
- + Relying on the older models of local account creation and IP-based ACLs is easier. This is a very limited view. Stop it.
- + If you can't fix it all yourself (and you can't), facilitate the efforts of groups that can. Build relationships, target your spending or funding to make the biggest impact.

Critical Takeaway – Federated Identity Supporting Science and Research

- + For Science development and research collaboration to happen without Identity & Access administrative overhead and operational burden:
 - + Institution must consider Federated Identity Management as part of their IT Strategy & Policy
 - + Implement Federated Identity Management across the campus
 - + Support the researchers and their research with FIM as a priority
 - + Support with funding, carry out awareness training and deploy IdPs and enable relevant services with federated identity management infrastructure
- + For federated identity to be successful at a national level, the research community needs:
 - + IT departments to expedite setup and access
 - + To carry out their research with less or no administrative overhead and burden
 - + Federated Identity Management be clearly stipulated in the funding rule (by Funder, Govt.)
 - + Government Research Institutes to take advantage of the service already offered by Tuakiri in NZ

What is the Value?

- + Connect anything web-based once only: optimize access to services,
- + Move faster: accelerate applications and service delivery,
- + Work efficiently: reduce operational effort and cost, and
- + Unlock value: enable user managed access and increase productivity.