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The Swiss Initiative in Systems Biology

Web SSO with Cloud Resources using AD Federation Services

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FMI / SystemsX

FIM4R

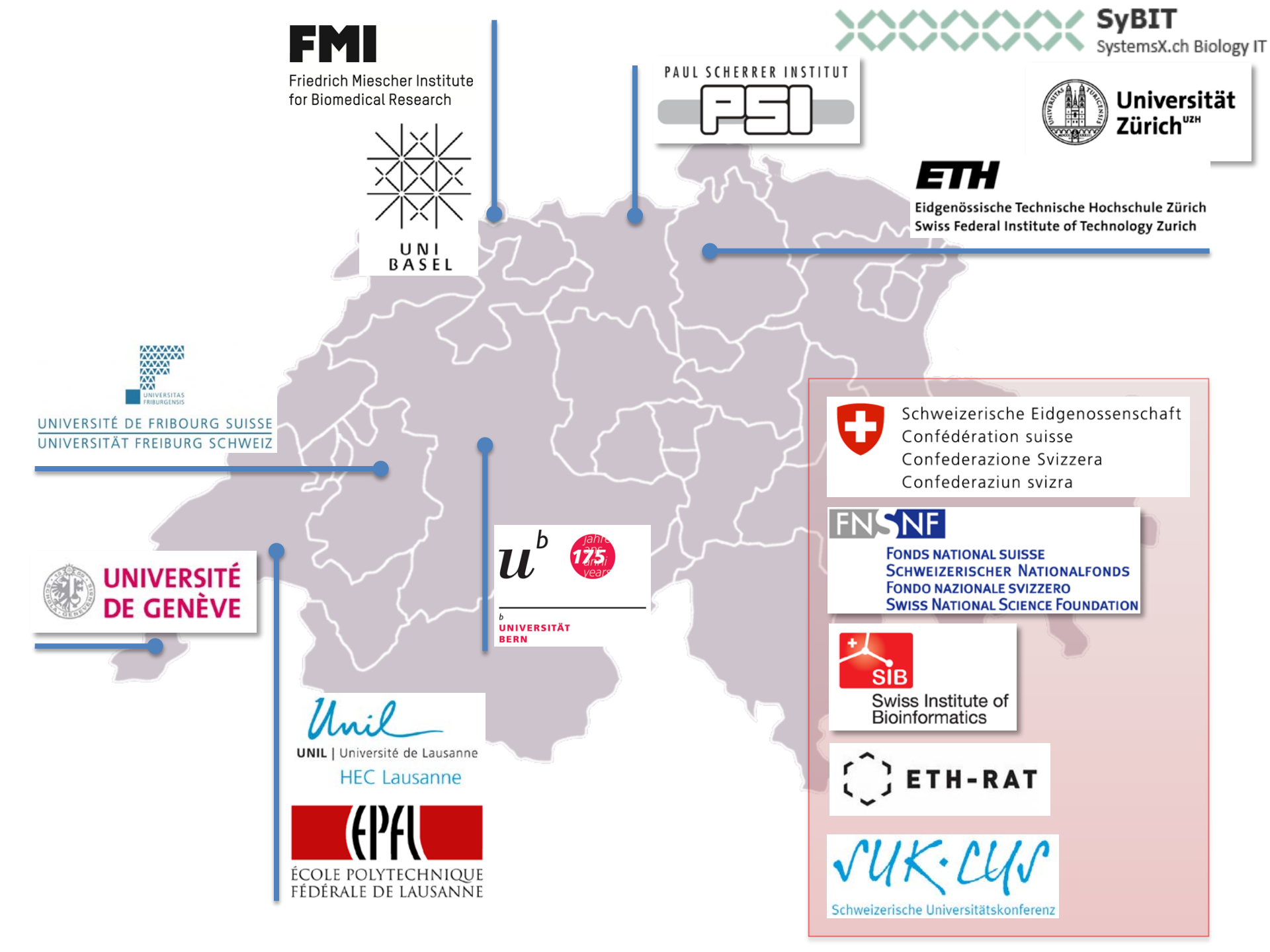
March 21st, 2013 at PSI

Overview

- Short introduction of SystemsX
- Goal
- Current situation
- Three ADFS test cases
- Tool for self-federation
- Azure Active Directory
- Summary

SystemsX.ch
The Swiss Initiative in Systems Biology

- Mission
  «SystemsX.ch is determined to become a world-leading initiative in quantitative Systems Biology.»
- SystemsX.ch is open to any Swiss university or research institution.
- http://www.systemsx.ch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Some Numbers and Facts

- 1000 scientists
- 200 research groups
- 11 universities and research institutes
- Work together inter-disciplinarily

Problem Description

- Goal: Increase sharing of resources, inter-institutional collaboration, inter-disciplinary collaboration, international collaboration, as well as academic and industry cooperation.
- Problem: Lack of FIM is seriously impairing research and is a critical problem.
- Solution: Robust inter-institutional self-federation approach where all users and institutions can easily participate.

Is this the solution?

Or this?

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ARTICLES

A Particle Consistent with the Higgs Boson Observed with the ATLAS Detector at the Large Hadron Collider

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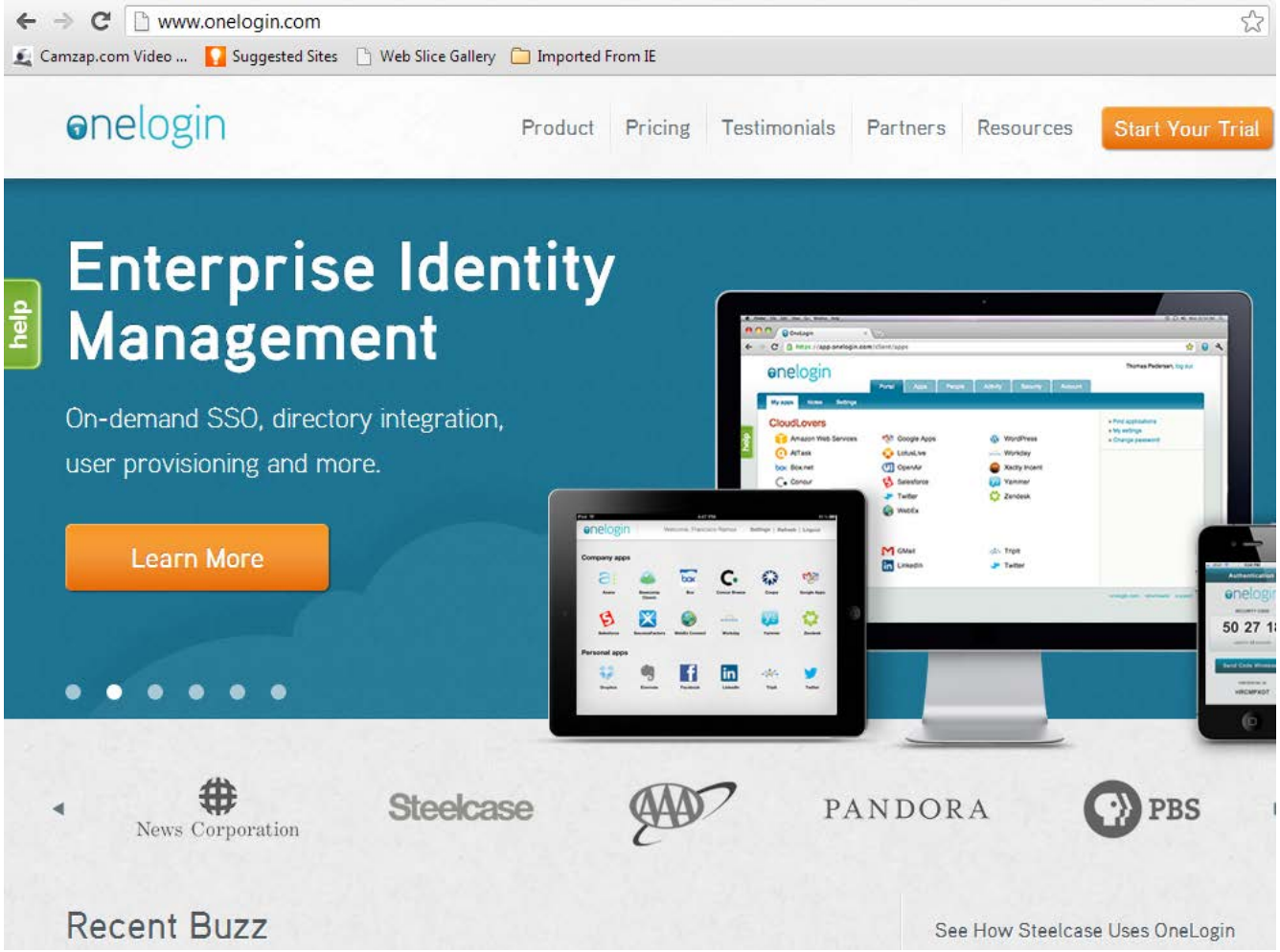
† The complete author list is included as supplementary material for this paper.

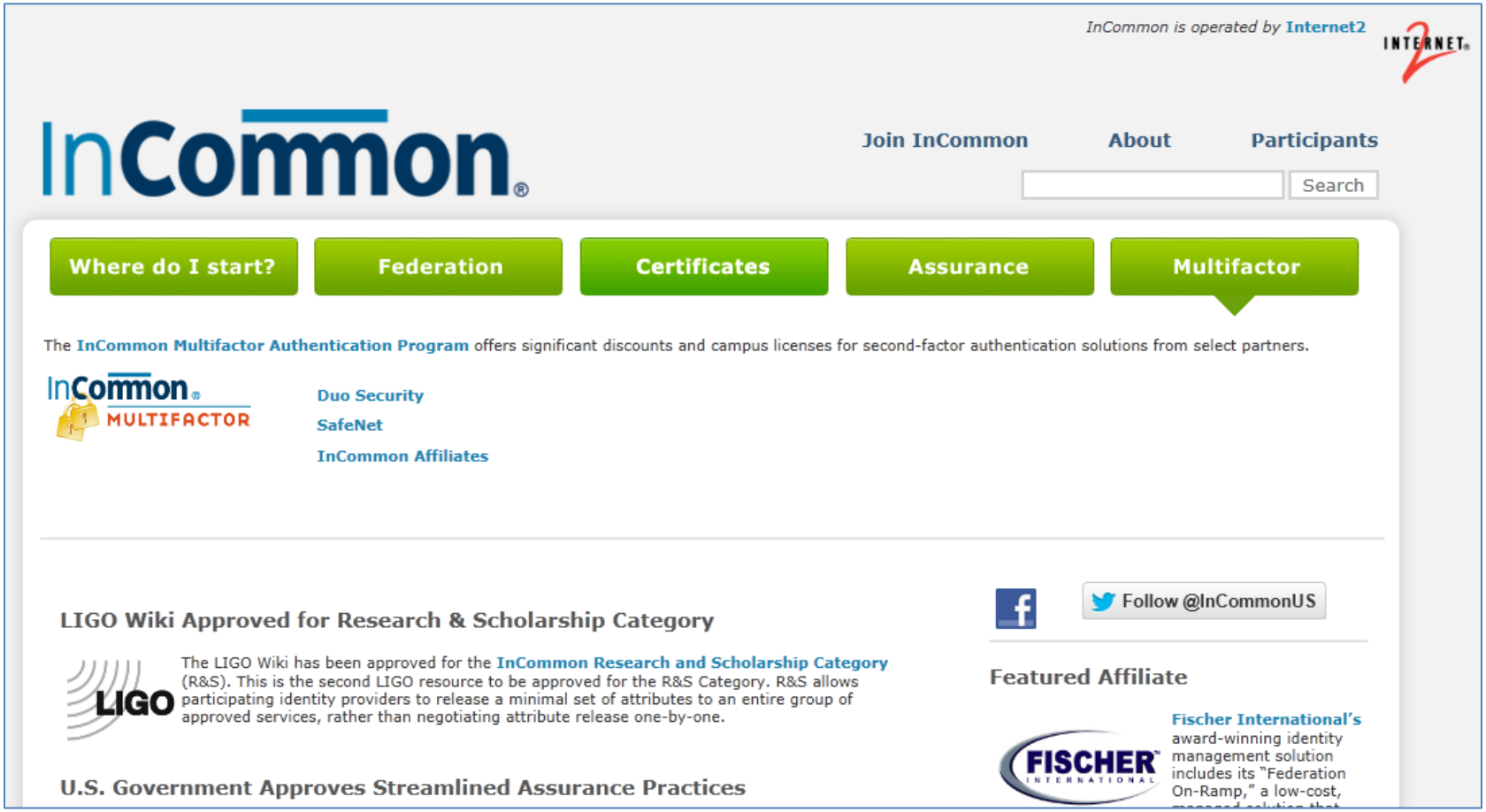
ABSTRACT

Nearly 50 years ago, theoretical physicists proposed that a field permeates the universe and gives energy to the vacuum. This field was required to explain why some, but not all, fundamental particles have mass.

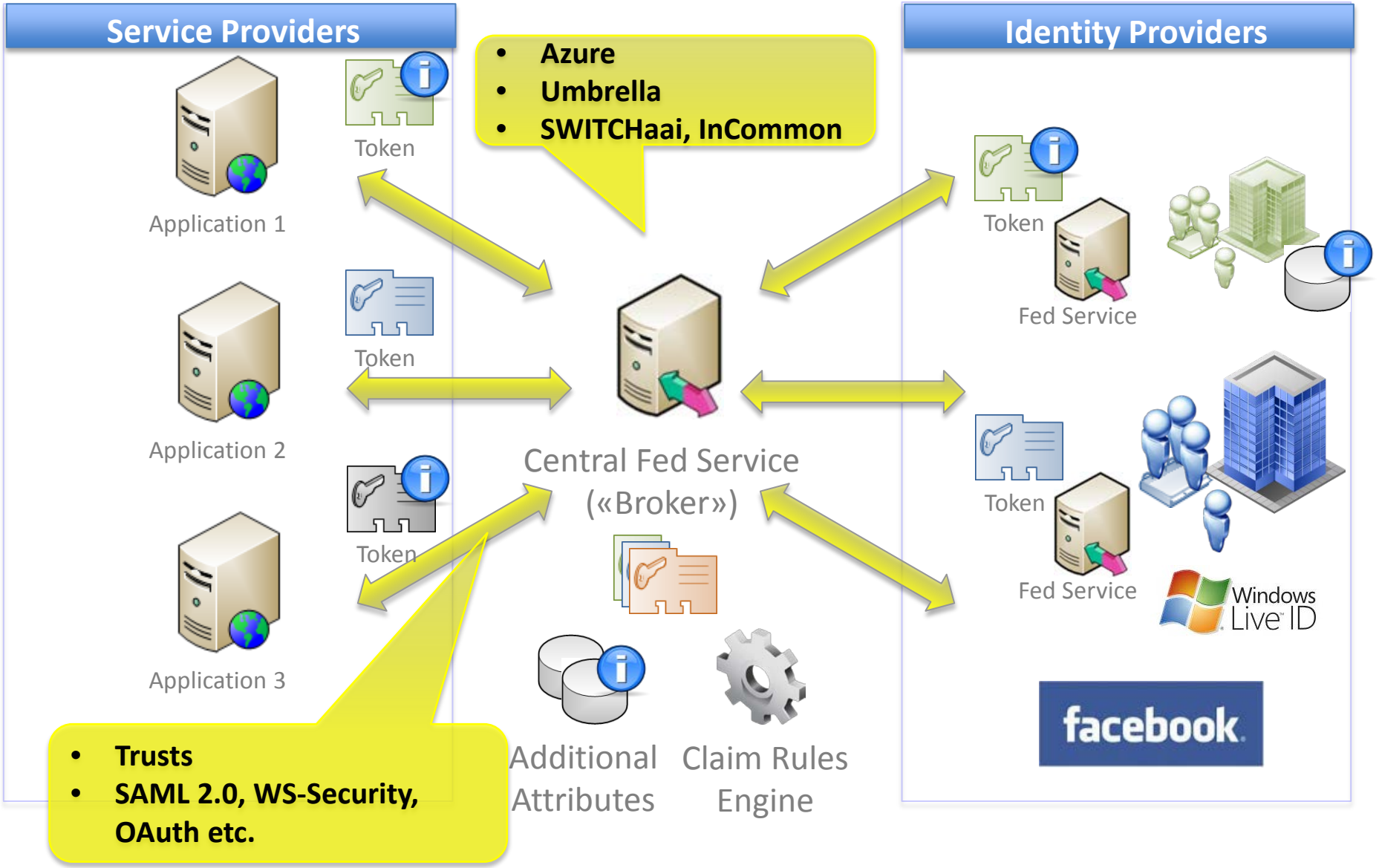
Solved problem?



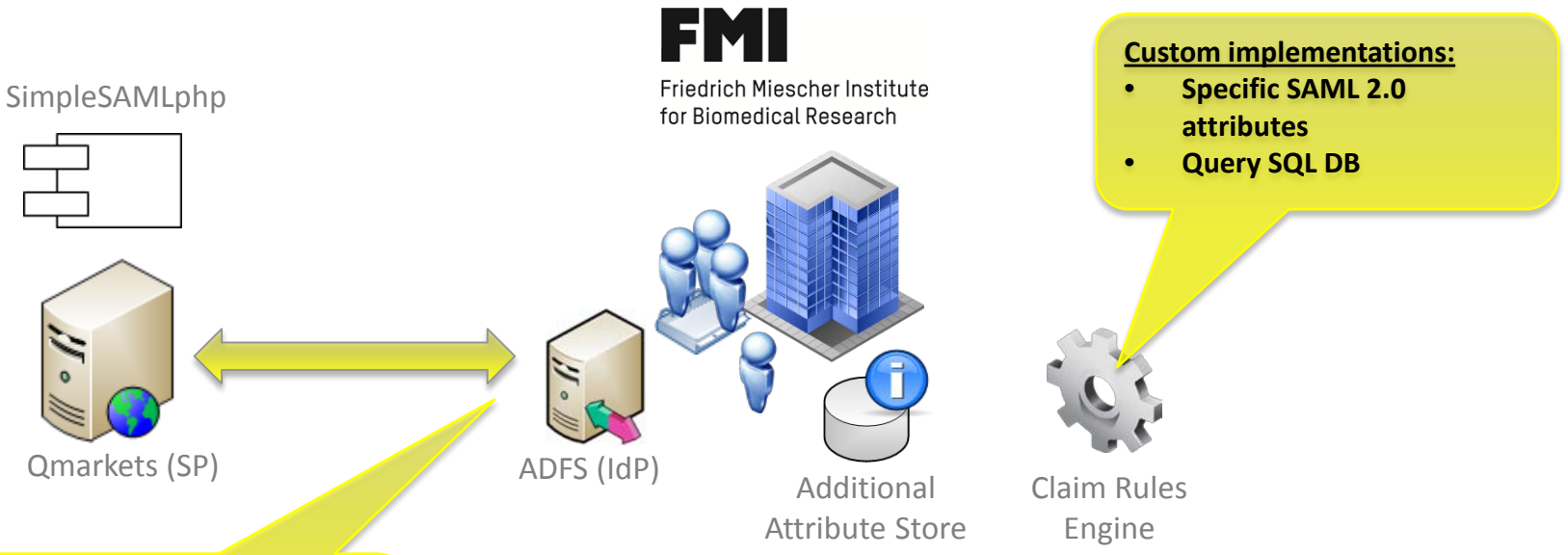
A model for Europe?



Typical Architecture



Example 1: Federation with Qmarkets



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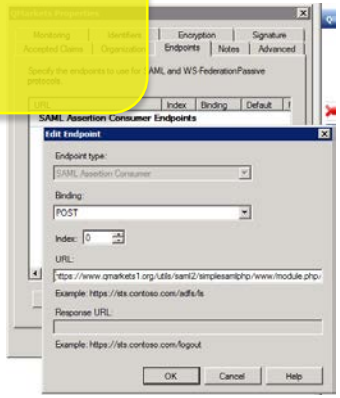
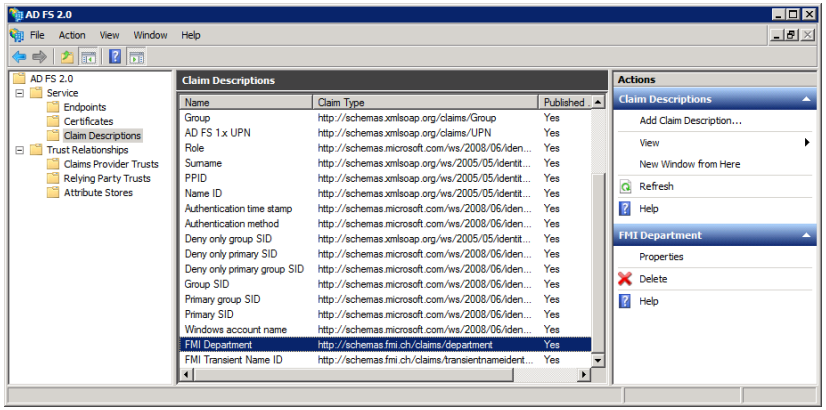
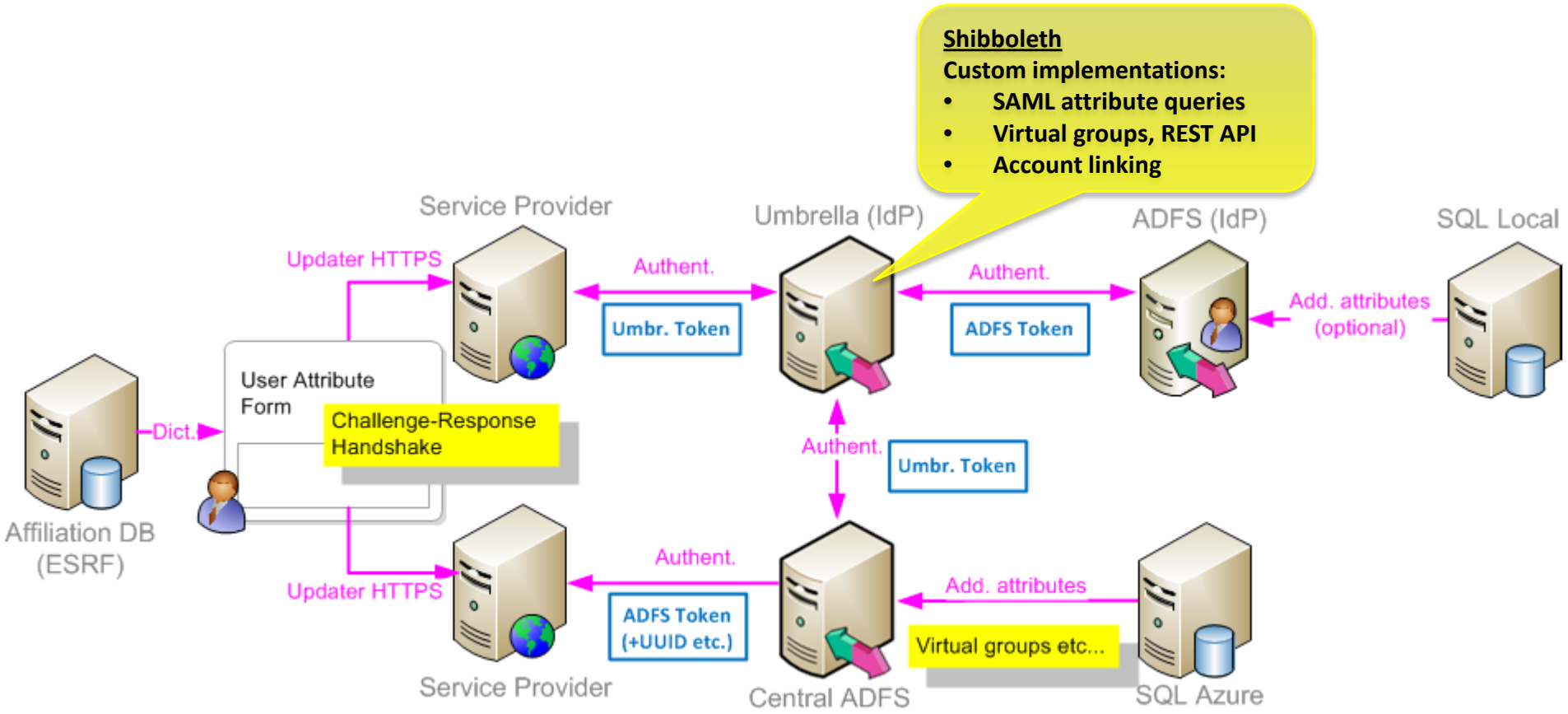
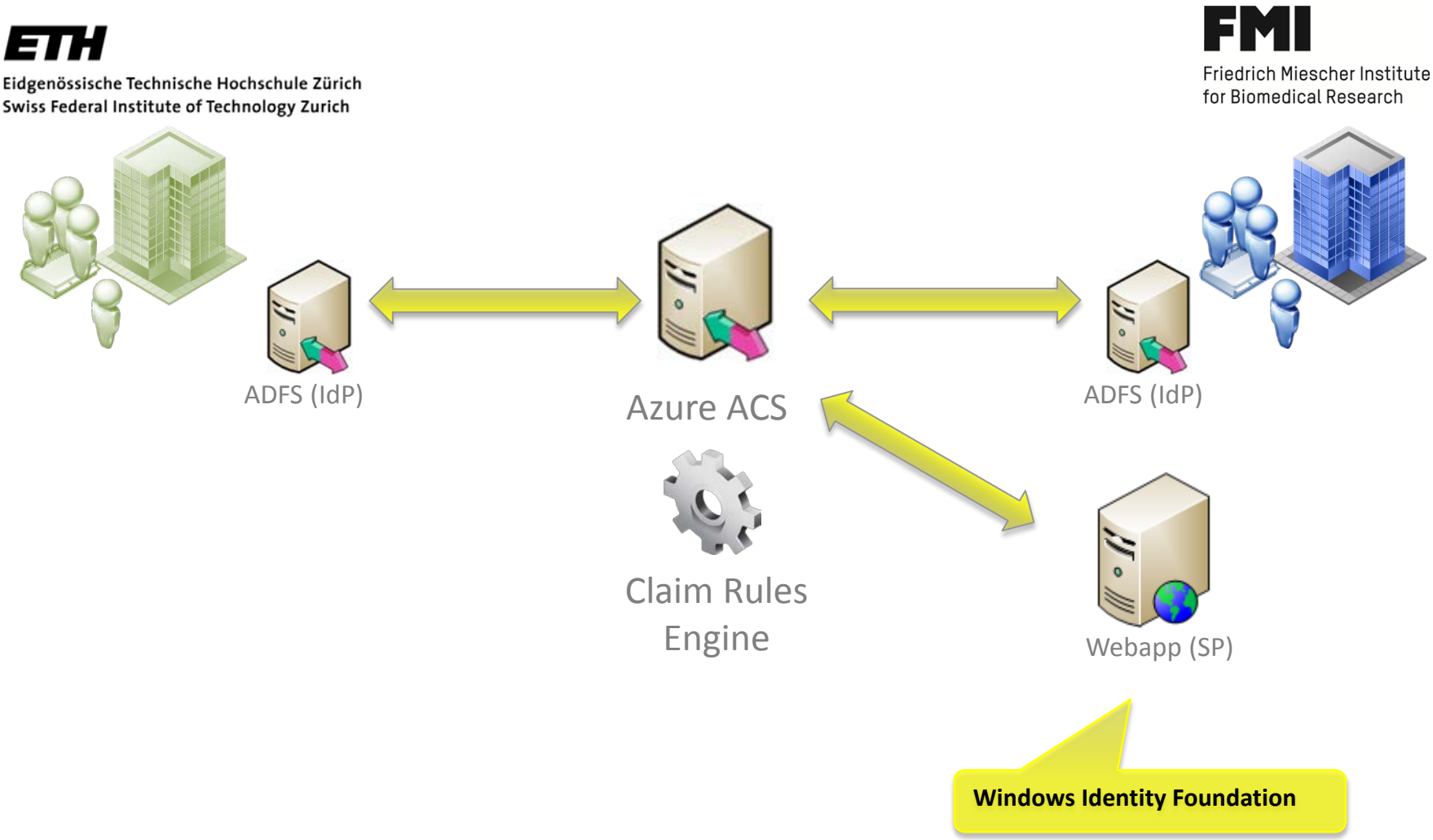




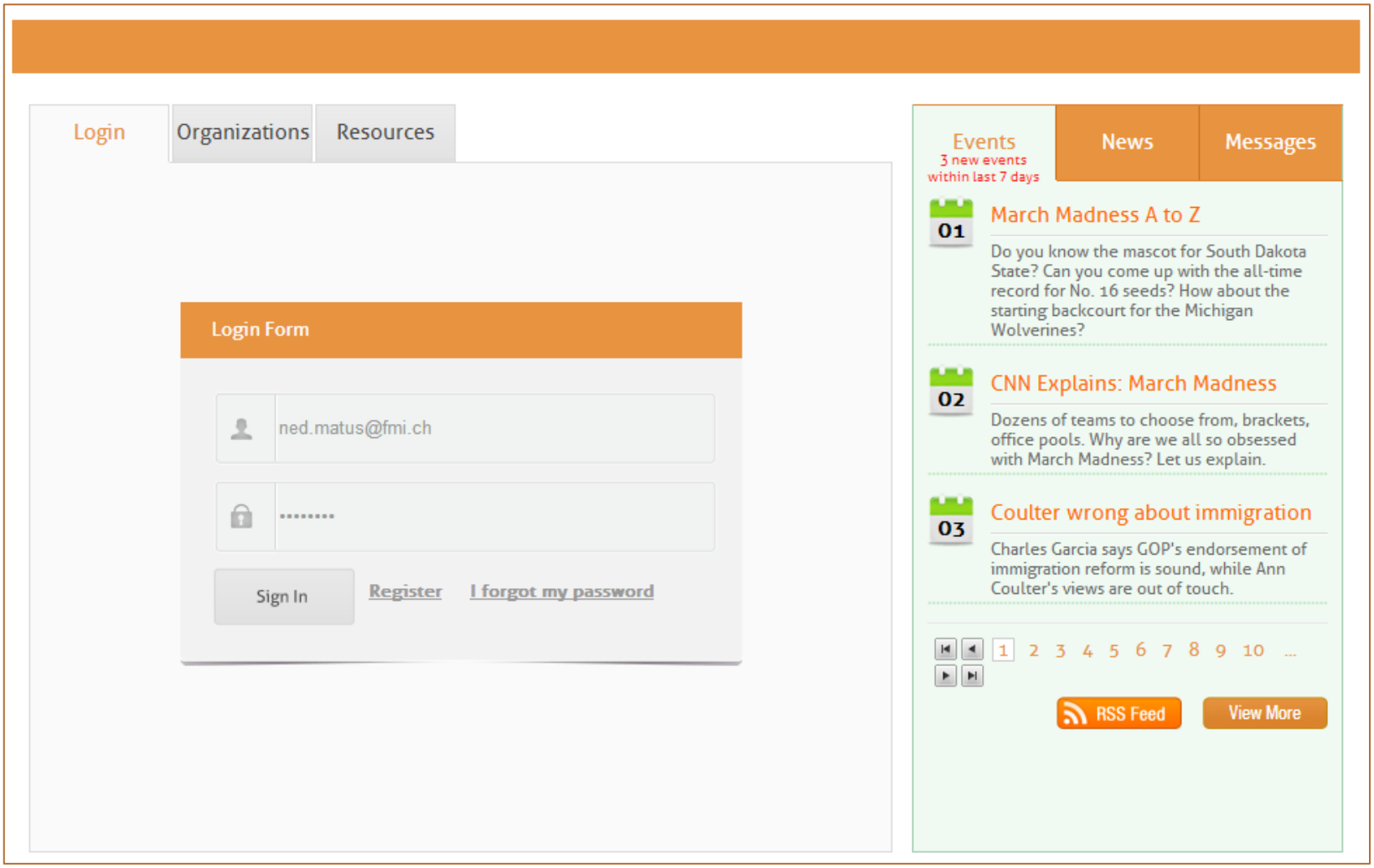
Example 2: Integration with Umbrella



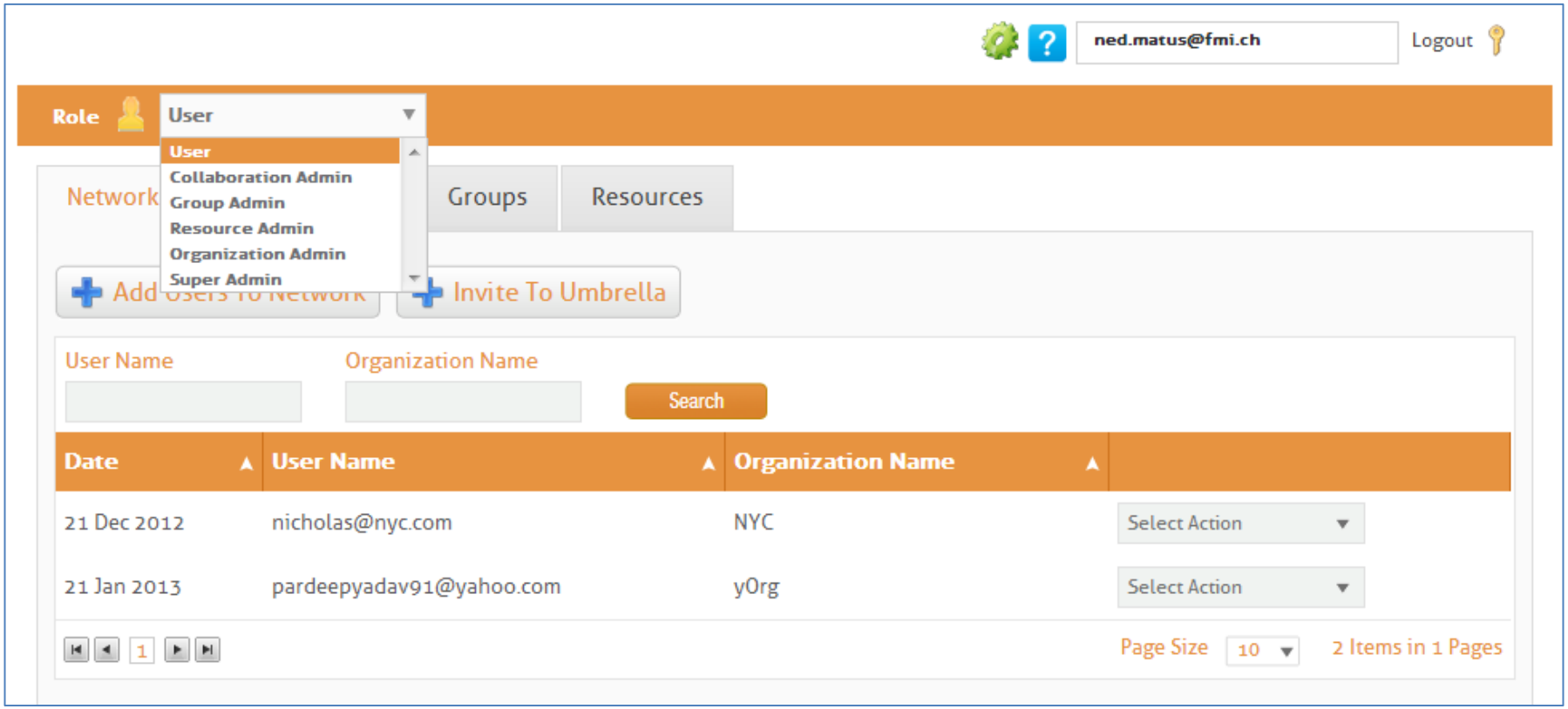
Example 3: Federation with ETH-Z over Azure ACS



Self-federation Portal (a hybrid approach)

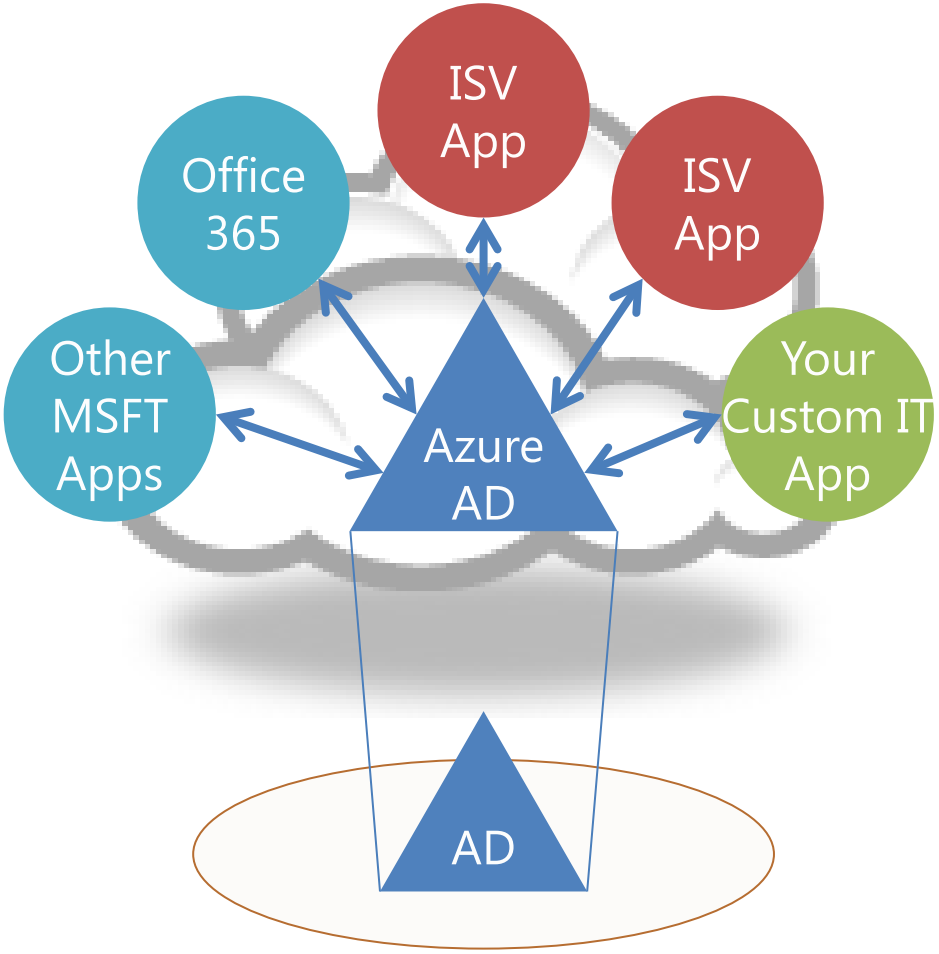


Self-federation Tool



Azure Active Directory

- Azure AD is relatively mature but only recently rolled out.
- Identity as a service
- Consolidate identity management across cloud apps
- Connect to directory from any platform, any device
- Connect with people from web identity providers and other organizations



Summary

- We feel that the self-federation concept is vital to an all inclusive federation necessary for research and potentially avoids many of these long discussions.
- Technically all components are available for making FIM a commodity item.
- A trusted platform such as Azure offers a valuable low cost federation backbone.
- Federation should be fully under the control of the institution and attribute management under the management of the user.
- Next step is to make a fully functional version with Azure AD with multiple organizations, and we are happy to collaborate with others on this.