SURFnet is the Dutch National Research & Education Network (NREN)
- Services, innovation, knowledge
- Not for profit
- Task organisation of Stichting SURF = ICT collaboration of higher education & research

A small operation serving a large community:
- 85 employees
- 160 connected institutions
- 1 million end-users
- Turnover 35 million Euro; 1/3 innovation subsidies
Why are we running services? we should be facilitating the seamless integration of open services from NRENs, commercial etc, #aspire
OpenConext

Open Source Middleware Platform for Collaboration

Institutions

Service Providers
OpenConext

- Middleware for building Collaboration Platforms
- Open Source, Apache 2 License
- Available since 2011

The Netherlands – SURFconext (SURFnet)
   A national Collaboration and Service delivery platform for Higher Education & Research

United Kingdom – JISCconext (JISC)
   A collaboration platform around email groups, will services about 1 million endusers

Australia (AARnet)
   A service delivery for AARnet services in Australia and New Zealand
A next generation collaboration infrastructure that creates new opportunities to collaborate online based on a combination of applications from different providers.

Researchers, educators and students wish to select the tools that best fit their online collaboration needs. Institutions and Collaborative Organizations struggle with the integration of self-hosted services with commercial cloud services. Service providers seek for ways to make their services easily accessible for users in higher research and education.

SURFconext is the platform to facilitate these needs.
Collaboration Platform

- Federated Authentication
- Centralized Groups
- Portals

Federated Authentication
Leverages secure, trusted authentication and Single Sign on for Campus and Cloud applications

Centralized groups
Used for Adhoc collaborations and institutional groups

Portals
Bring together distributed services to provide end-users with a coherent set of services
Service Delivery Platform

- Federated Authentication
- Attribute based Authorization
- National Procurement & Licencing

Create Trusted Services
By combining Identity Federation, privacy and data protection regulations and license deal in one contract between Service Provider and (all) Dutch institutions
Edugroepen | 2AT BV

Group license available
Extra group conditions may apply
The license is valid until 31-12-2014

Collaboration platform for working in groups in the educational sector. To use this service, a license is obligatory. If you don't have one, please contact SURFmarket first before taking any further steps.

Attribute Release Policy
These attributes will be exchanged with Edugroepen | 2AT BV:

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<tr>
<th>Attribute</th>
<th>Explanation</th>
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<tr>
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Screenshots of Edugroepen | 2AT BV
Berlin-Brandenburg Academy of Sciences | CLARIN

No license information available
This service may work without a SURFmarket license

Attribute Release Policy
These attributes will be exchanged with Berlin-Brandenburg Academy of Sciences | CLARIN:

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AARnet

OpenConext

SINGLE SHOP FRONT FOR SERVICES
E-SCIENCE ORGANIZATIONS
Groups are core to collaboration

Any collaboration is based on groups. In modern eScience these groups are dynamic and international;

Distributed Services

COs collaborate around distributed services. Managing and maintaining many SP IdP interconnections is tough;

Attributes, roles and rights

Roles and rights are based on Attributes. COs need very different attributes as compared to the attributes provided by the IdPs.
Centralized and external group providers
OpenConext provides a centralized group provider and allows linking external group providers;

Manage services
CO SP and IdP connections can be manage centrally, including Access Policies and Attribute Release Policies;

Attributes
Can be transformed and filtered both at logon as well as when queried out-of-band.
Example Cases

• Virtual Campus Hub
• WeNMR

Virtual Campus Hub
Create a virtual education portal for a joint programme, consisting of applications made available by the partners involved in that programme, and to which all relevant users have seamless access;

WeNMR
Bringing together research teams in the structural biology and life science area. The project offers a platform integrating services and streamlining the computational approaches necessary for data analysis and structural modelling.
WeNMR

- Connect HPC to federation
- Federated Portal
WeNMR and eduGAIN
## Partners in Virtual Campus Hub

<table>
<thead>
<tr>
<th>Institute</th>
<th>Acronym</th>
<th>Leading staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical University of Denmark</td>
<td>DTU</td>
<td>Merete Badger</td>
</tr>
<tr>
<td>Royal Institute of Technology, Sweden</td>
<td>KTH</td>
<td>Torsten Fransson</td>
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<tr>
<td>Politecnico di Torino, Italy</td>
<td>Polito</td>
<td>Laura Farinetti</td>
</tr>
<tr>
<td>Eindhoven University of Technology, Netherlands</td>
<td>TU/e</td>
<td>Frank Vercoulen</td>
</tr>
</tbody>
</table>
Concept: virtual education portal for joint programs

Virtual education portal for joint program with apps from TU/e, DTU, KTH and PoliTo
1. Inventory of the most important ICT barriers for international collaboration in education.

2. Demo platform to prove that some of these barriers can be removed:
   - Easy access to partners’ applications (FIM)
   - More efficient and more flexible setup of online activities or online participation in regular activities (UC hub)
   - Easier collaboration with industry (non-HE IdPs)

3. Vision on how to apply these insights and experiences in concrete collaboration initiatives (e.g. international joint programs)
Demo portal (proof of concept)

Functionality:
- Access with your own account to partners’ applications
- Create international groups (virtual organizations)
- Single sign-on access through simple website (https://vch.tue.nl)

Virtual Campus Hub

Virtual Campus Hub is a collaborative project between four technical universities in Europe. The project runs from October 1, 2011 to September 30, 2015. The project is partially funded by the European Commission under the 7th framework Programme. More information can be found on the official project website.

Partners

- SURF NET
- WAYF
- SHARE
- IOEM - Italy

TU/e
Technische Universiteit Eindhoven
University of Technology

12-06-2013
IdPs connected to VCH

Login via your institution

Select your institution and continue to login to VCH Portal | TU/e

Our Suggestion: TU/e
Eindhoven University of Technology

or search for an institution

This service is powered by SURFconext - brought to you by SURFnet.

VIRTUAL CAMPUS HUB
Part of Explore Explore
Enabling international collaboration: National (NRENs) and European (Géant)
Results

- Connections realized for several identity providers (IdPs) and applications (SPs).
- Cloud service (DTU itslearning) connected to VCH
- Scalability of concept shown (by adding extra IdPs)
- Knowledge and experience with respect to using Géant-eduGAIN
Experiences

- FIM is promising technology and fairly well standardized across NRENs (except for group management)
- Enables institutions to join forces in education
- Knowledge and motivation at local institutions still very limited
- Crossing borders (inter-federation) is also new to NRENs
- Difficult to sell infrastructure improvements to users
- Not allowing industry on Géant infrastructure as IdP hampers collaboration with industry
- Involve federations and central IT departments from the start!
- UC hub technology in earlier stage of development than federated logon: few standards available (yet) and companies not very eager to connect to FIM infrastructure (yet?)
More information

- SURFconext
- OpenConext
  http://www.openconext.org

Workshop @Terena Networking Conference (May 19, Dublin)
https://tnc2014.terena.org/core/event/14