Supporting VO’s using VOOT

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I2FMM12 - Philadelphia
The Problem space
Scientists working together

- A **dynamic** group of people working together
- **Beyond** institutional borders
- Often in an **international** context
Collaboration Applications

Mailinglist
Document sharing
Wiki
Calendar
Messaging
Webconference
Blog
...
...
A collaboration is dynamic

- People come (must be added to the collaboration)
- People go (must removed from the collaboration)
- In every application of the collaboration...
The Solution space
Virtual Organisation Orthogonal Technology
• **One** place to maintain a group

• *(re)*use it in **every** application
VOOT Example

- Foodle, an online scheduling application
- Uses the groups concept
- Can make use of remotely hosted groups
- User connects to his remote group provider within Foodle
- User sees both local groups as remote groups
Groups maintained in a (remote) application (e.g. SURFteams)
Users connects from Foodle to this remote group provider
User logs in to the remote group provider (SURFteams) and consents to release his group information to Foodle.
User now sees and can make use of the remote group to schedule a meeting
• **One** place to maintain a group
  ‣ *SURFteams*

• *(re)***use** it in **every** application
  ‣ *Foodle*
Use Cases

- Group exchange for access control on collaboration service
- Invitation of new users to an application
- Mailing list server
Access Control on a Wiki

• A user creates a **resource** and associate **access control** with **references** to the members of a **remote group**. The user needs to see a list of all relevant **groups** to use when setting up access.

• When a user **access** a **resource**, the application retrieves a list of **all remote groups** the current user is member of.
A user creates a resource and would like to invite a group of users/ collaborators. The application needs to retrieve a list of groups to display to the user, and a list of members of a group (with contact details).
Mailinglist

- A mailinglist is configured to obtain **members** from a **remote source**. The application needs to be able to **retrieve a member list** of a **specific group** from the VOOT Provider, **identified as itself or on behalf of a list owner**, and it needs to get the display name and email address of each member.
Trusted communication between services
Identity & trusted communication between services

IdPs

VOOT Provider

VOOT Client

IdPs

REST API OAuth
• Orthogonal

• Can be independent of Identity Federations (Loosely coupled systems)

• Needs to authenticate to get the implicit reference to the ‘current user’ in local context. (the magic keyword @me)
Abstract Protocol

- **getMyGroups()**
  - Returns list of groups current user is member of

- **getGroupMembers(groupid)**
  - Returns list of persons of a specific group
Data Model

- **Group**
  - ID
  - Name
  - Description
  - ...
  - ...
  - ...

- **Person**
  - Name
  - E-mail Address
  - Role in a specific group (!)
  - ...
  - ...
  -...
Explicit Protocol

• OpenSocial
  – In flux
  – Extensive
  – VOOT as subset

• SCIM
  – Promising
  – Needs some adjustments

• Independent
Retrieving my groups

VOOT mapped to OpenSocial

https://<server>/voot/groups/@me/
Retrieving the persons in a group

```json
{
  "startIndex": 0,
  "totalResults": 2,
  "itemsPerPage": 2,
  "entry": [
    {
      "id": "84",
      "displayName": "Benn Oshrin",
      "name": {
        "formatted": "Benn Oshrin",
        "givenName": "Benn",
        "familyName": "Oshrin"
      },
      "emails": [],
      "voot_membership_role": "member"
    },
    {
      "id": "119",
      "displayName": "Maarten Kremers",
      "name": {
        "formatted": "Maarten Kremers",
        "givenName": "Maarten",
        "familyName": "Kremers"
      },
      "emails": [
        {
          "value": "maarten.kremers@cocoa.nil",
          "type": "email"
        }
      ],
      "voot_membership_role": "owner"
    }
  ]
}
```

VOOT mapped to OpenSocial

https://<server>/voot/people/@me/<groupid>
Proof of Concept

- Foodle - Uninett
- SURFconext - SURFnet
- COIP - SUnet
- Sympa - Renater
Examples within SURFconext

• CoCoA

• Institutional groups
1. Federated IdM (SAML2)

2. Group management

3. OpenSocial API
Groups in SURFconext

- Institutional groups
- "External" groups
- VO groups

SURFconext provides collaboration services:
- Wiki
- Document sharing
- Web conferencing
- Calendaring
- Messaging

- Institutional Services
- VO-specific Services
- Cloud Services
Supporting Virtual Organisations

COmanage

CoNext

Applications
CoCoA
## SURFteams

<table>
<thead>
<tr>
<th>Team</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cocoadev</td>
<td>COCOA Developers</td>
</tr>
<tr>
<td>maarten-test-group</td>
<td>Test for demo</td>
</tr>
<tr>
<td>Team NORDUnet</td>
<td>Team NORDUnet</td>
</tr>
<tr>
<td>utf8-test</td>
<td>utf8-test</td>
</tr>
<tr>
<td>vamp</td>
<td>Test for demo</td>
</tr>
</tbody>
</table>
CoCoA

SURFteams

This group information is provided by Comanage Demo and is therefore read-only.

< Back to teams

Team NORDUnet (Comanage Demo)

Team NORDUnet

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benn Oshrin</td>
<td>Not shared</td>
</tr>
<tr>
<td>Niels van Dijk</td>
<td>Not shared</td>
</tr>
<tr>
<td>Barack Kremers</td>
<td><a href="mailto:barack.kremers@cocoa.nl">barack.kremers@cocoa.nl</a></td>
</tr>
</tbody>
</table>
CoCoA

This group information is provided by Comanage Demo and is therefore read-only.

< Back to teams

utf8-test (Comanage Demo)

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>一枝山地</td>
<td><a href="mailto:kazu.yamaji@cocoa.nl">kazu.yamaji@cocoa.nl</a></td>
</tr>
<tr>
<td>זכין אחורי</td>
<td><a href="mailto:benno.ashrin@cocoa.nl">benno.ashrin@cocoa.nl</a></td>
</tr>
<tr>
<td>Barack Kremers</td>
<td><a href="mailto:barack.kremers@cocoa.nl">barack.kremers@cocoa.nl</a></td>
</tr>
</tbody>
</table>

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3501 DA Utrecht
CoCoA
# Institution

## SURFteams

<table>
<thead>
<tr>
<th>Team</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIF-medewerkers</td>
<td>Diensteanheid ICT en Facilitair</td>
</tr>
<tr>
<td>DIF-ICT-O-medewerkers</td>
<td>ICT Dienst Ontwikkeling</td>
</tr>
<tr>
<td>DIF-ICT-medewerkers</td>
<td>ICT Dienst</td>
</tr>
</tbody>
</table>

SURFnet bv  Radboudkwartier 273  Postbus 19035  3501 DA Utrecht  For questions email: help@surfteams.nl
Institution
Challenges

• UX improvements
• Bad support for dynamic ad-hoc integration of groups in software
Future Work

• Settle with the right protocol
• Discovery
• Scalable automated trust between providers and consumers
"Make things as simple as possible, but not simpler."